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THE

NEW DISPENSATORY:

CONTAINING,

I.

The ELEMENTS of PHARMACY.

II.

The MATERIA MEDICA, or an Account of the Subſtances employed in Medicine; with the Virtues and Uſes of each Article, ſo far as they are warranted by Experience and Obſervation.

III.

The Preparations and Compoſitions of the new LONDON and EDINBURGH PHARMACOPOEIAS; with ſuch of the old ones as are kept in the Shops; the moſt celebrated foreign Medicines; the moſt uſeful of thoſe directed in the Hoſpitals; ſundry elegant extemporaneous Forms, &c. digeſted in ſuch a Method as to compoſe a regular Syſtem of Pharmacy; with Remarks on their Preparation and Uſes; the Means of diſtinguiſhing Adulterations; of performing the more difficult and dangerous Proceſſes with Eaſe and Safety, &c.

The Whole interſperſed

With Practical Cautions and Obſervations.

BY W. LEWIS, M.B. F.R.S.

The FIFTH EDITION, carefully Reviſed and Improved.

LONDON,

Printed for C. NOURSE, in the STRAND.

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AUTHOR's PREFACE.

THE New Diſpenſatory was intended as a regular book of practical and ſcientific pharmacy; compoſed of principles agreeable to thoſe, on which the colleges of London and Edinburgh have proceeded, in the late reformation of their officinal pharmacopœias; containing full and clear directions, drawn from actual experience, for the preparation of the ſeveral medicines, particularly where accompanied with any difficulty or danger; and aſſigning every where, as far as poſſible, their real virtues and uſes; intentions, which though of primary importance in a work of this kind, do not ſeem to have been at all regarded, in the other diſpenſatories that have hitherto appeared.

The author has had the ſatisfaction of finding that his endeavours have not been in vain; that though the work fell very far ſhort of the perfection which he wiſhed for, it was diſtinguiſhed with approbations even beyond his hopes; with approbations, which have induced the compilers of the other diſpenſatories to borrow very conſiderable parts of it in their laſt editions; in one of which, beſides many paragraphs and entire pages here and there, the greateſt part of two hundred pages together is illiberally copied from this work.

In this edition, I have made many material corrections and additions; and retrenched ſundry exceptionable particulars, which, in compliance with common prejudices, had been admitted in the firſt attempt.

The firſt part contains the Elements of Pharmacy, or what is commonly called Pharmaceutical Chemiſtry. The general neglect of this intereſting and uſeful ſtudy, as applied to medicinal ſubjects, has engaged me to greatly enlarge this part, and to labour it with more care and preciſion. I have endeavoured to give a conciſe and ſyſtematic view of the general properties and relations of vegetable, animal, and mineral bodies; the different medicinal principles they contain; the means of extracting and ſeparating their native component parts, without making any alteration in their qualities; and the different forms and powers which they aſſume, from different natural or artificial operations, or from the mixture and coalition of one with another; avoiding every where all hypothetical reaſonings, and delivering only the direct reſult of experiment and obſervation. To this hiſtory is added a practical account of the inſtruments and operations of the art, which, it is hoped, will give the reader a full idea of them, without the tediousneſs of minute details.

The next part contains the Materia Medica, or medicinal ſimples, which, for reaſons aſſigned in the introduction to this part, are all ranged in alphabetic order. Rationales of the operations of medicines, which are at beſt but conjectural and unſatisfactory, have no place in this practical work: but ſome general obſervations, of the ſenſible effects of certain claſſes of medicines, in Cartheuſer's manner, it has been thought expedient to retain, with ſome amendments from the former editions.

In treating of the ſeveral ſimples themſelves, I have given, where neceſſary, a deſcription of the ſimple, with the marks of its genuineneſs and goodneſs; and pointed out the diſtinguiſhing characters of ſuch as, from a reſemblance in external appearance, are liable to be confounded with others of different qualities. With regard to their virtues, particular care has been taken to reject the fabulous ones, which are ſtill preſerved in other books of this kind; and to give only thoſe, which have either been confirmed by repeated experience, or may be rationally inferred from the ſenſible qualities of the ſubject, or from its agreement in ſmell, taſte, &c. with others of known virtue. Under each ſimple are mentioned all the preparations made from it, and all the compoſitions in which it is an ingredient, in the London and Edinburgh pharmacopœias. Many of the capital articles I have examined pharmaceutically, and ſhewn in what ſeparable part of the mixt its virtue reſides, by what means the active principle is beſt extracted or preſerved, and in what form the ſubſtance itſelf or its preparations are moſt commodiouſly and advantageouſly exhibited. At the end of this part, the directions for the collection and preſervation of medicinal ſubſtances are re-conſidered.

The third and fourth parts contain the preparations and compoſitions of the new London and Edinburgh pharmacopœias; with a few of the old ones, which I am informed are ſtill kept in ſome ſhops, and occaſionally called for; ſeveral of the more celebrated medicines which have come into eſteem in France and Germany; many from our hoſpitals; and ſome elegant extemporaneous preſcriptions, ſuch as are directed in practice.

In the diſtribution of theſe materials, it has been found neceſſary to depart from the order hitherto received. In other diſpenſatories, and in a former edition of this, medicines are divided into two general heads, officinal and extemporaneous. This diviſion is apparently faulty: for many of thoſe called officinal are ſtrictly extemporaneous, being made only as they are wanted: and many of thoſe, which are called extemporaneous, are very well fitted for keeping: if we ſhould appropriate the term officinal to thoſe which have the ſanction of public colleges, then this abſurdity would follow, that medicines of as tedious preparation as any in the book, even Baumé's extract of opium, which requires ſeveral months continual boiling, would be extemporaneous preparations.

To avoid this impropriety, and that of repeating the ſame forms, and frequently almoſt the ſame compoſitions, in different parts of the book; I have ranged medicines of ſimilar preparation or compoſition in one claſs, without regard to the ineſſential circumſtances of their being uſed at London or at Edinburgh, at Paris or at Berlin, in the ſhops or in the hoſpitals; and have endeavoured to diſpoſe them in ſuch a manner, as to form, ſo far as could be done with ſuch materials, one regular whole, a connected ſyſtem of practical pharmacy. That the medicines of the London and Edinburgh colleges may be the more readily known from the others, their titles are printed in a larger character. The diſtinction, indeed, between preparations and compoſitions, the former of which make the third part, and the latter the fourth, is not perhaps altogether unexceptionable, conſidering the great multiplicity and diverſity of the ſubjects, many of which partake of the nature of both, though ſome more of one, and others of the other: but this does not at all affect the plan, or produce any diſorder in the ſyſtem, which continues the ſame whether this diſtinction is retained or dropt.

The Edinburgh medicines are taken from the laſt edition of the *Pharmacopœia Edinburgenſis*, publiſhed in the year 1756, a complete tranſlation of which has not before appeared.

In tranſlating the ſeveral preſcriptions, wherever the originals appeared too conciſe or obſcure, the liberty has been taken of expreſſing the directions in a more full and clear manner, with care not to vary the ſenſe. The ingredients in the ſeveral compoſitions are, for the greater diſtinctneſs (a point which throughout the whole has been particularly aimed at) ranged in different lines, as in the originals. For want of ſome method of this kind, there are inſtances of ingredients being confounded, and two articles miſtaken for one.

To the ſeveral medicines is ſubjoined, where it ſeemed requiſite, an account of the principles on which they are built; together with their virtues, uſe, and doſe; and the cautions neceſſary to be obſerved in the exhibition of them. To the more difficult or dangerous operations is added a full deſcription of the method of performing them with advantage and ſafety; and to ſuch medicines, as are liable to ſophiſtication, the means of diſtinguiſhing the genuine from the adulterated. In theſe practical remarks on the particular preparations, and on the general claſſes of them at the beginning of the reſpective chapters and ſections, the author has laboured with diligence. If he has ſucceeded in executing his intentions, the directions are ſuch, as may enable every apothecary to prepare, as it is his duty to do, all his own medicines.

The tables, inſerted in a former edition, were ſo well received, that the other diſpenſatories have copied them entire. One of theſe tables, however, that of ſpecific gravities, appears, on re-examining it, to be exceptionable: great part of it was drawn from Dr. Friend's experiments, in his *Prælectiones chymicæ*, in which the numbers, by ſome accident, have been ſo faultily ſet down, that no dependence can be had upon them; and few other hydroſtatical experiments have been made on medicinal ſubſtances or their preparations. I have therefore now thrown out that table, but preſerved all that was valuable in it, reduced to a more uſeful form, in the table of the weights of certain meaſures of different fluids. I have likewiſe added ſeveral new ones, greatly enlarged the others, ſo as to render them of more utility in practice, and diſtributed them in the different parts of the work to which they belong. The facts on which they are built, where no authority is mentioned, are in all caſes (except only in the above-mentioned table of weights) from my own experience.

The author is ſufficiently ſenſible, that there are ſtill many imperfections in this performance; but hopes it will appear, that he has every where conſulted the dignity of the art, the eaſe and advantage of the operator, and the health of the patient.

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TO THE FIFTH EDITION.

IT is now ſome years ſince Dr. Lewis himſelf obliged the public with an improved edition of this moſt elegant and uſeful work. Since that period great improvement has been made in natural hiſtory, by the attention and labour of learned and ingenious men; and the Materia Medica conſiderably enriched with many valuable and uſeful articles. Therefore the editor (a new impreſſion being called for) has thought it neceſſary to make ſuch additions to the work as ſhould render the preſent edition complete and perfect. Beſides theſe additions, he has added to the vegetable articles of the Materia Medica the Linnæan names, where they were found to differ from thoſe of the other botanic writers which Dr. Lewis choſe to uſe. He has likewiſe introduced, in their proper places, the new articles which have been lately received into the catalogue of the Edinburgh college; and alſo corrected the former compoſitions of the Edinburgh Pharmacopæia by the laſt edition of that work; ſtill retaining many com-

poſitions, which it may, perhaps, gratify many readers to ſee, though they are now expunged by the Edinburgh college.

The new articles are marked with an aſteriſk, that they may be more readily diſtinguiſhed.——And as there is no other material alteration in the original, the editor hopes theſe additions, to a work ſo univerſally eſtabliſhed, and approved for its uſeful information, will not have been made in vain.

⁂ *In the laſt edition of the Edinburgh Pharmacopœia (printed in the year* 1783) *all the medicines, liquids and ſolids, are adjuſted by Troy weight only.*

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⁂ The uſeful compoſitions of the Pharmacopœia pauperum, which made a diſtinct part in a former edition, are here diſtributed in the two foregoing parts, all the medicines of ſimilar forms being now, for the convenience of the reader, placed together.

THE

NEW DISPENSATORY.

PART I.

Elements of Pharmacy.

CHAPTER I.

Definition and diviſion of Pharmacy.

PHARMACY is the art of preparing and compounding natural and artificial ſubſtances for medicinal purpoſes, in a manner ſuitable to their reſpective properties, and the intentions of cure.

THIS art has been commonly divided into two branches, GALENICAL and CHEMICAL: but no rational principle of diſtinction between them has as yet been fixed on. If it be a chemical proceſs to evaporate juice of plantane over a gentle fire till it becomes thick, it is ſurely not leſs chemical to evaporate the juice of ſloes in the ſame manner; and yet the former only is ranked among the chemical, and the latter among the galenical preparations. Frequently, alſo, one and the ſame preparation is in different pharmacopœias referred to the different branches; thus diſtilled waters and diſtilled ſpirits, which make the firſt of the galenical articles in one pharmacopœia, make the firſt of the chemical in another.

It is agreed on both ſides, that eſſential oils, extracts, reſins, volatile and fixt ſalts, the artificial neutral ſalts, metallic preparations, and other like productions, belong to the chemical pharmacy; and pills, boluſes, troches, electaries, draughts, ointments, plaſters, poultices, &c. to the galenical; as if the diſtinction was founded, neither on the nature of the operation, nor of the materials, nor of the effect produced, but merely on the form in which the medicine is intended to be taken or applied. Thus, the diſſolution of mercury in aquafortis is ranked among the chemical preparations; while the very ſame proceſs, with the additional circumſtance of uniting an unctuous material, which renders it, if any thing, ſtill more chemical, is nevertheleſs reckoned a galenical one, becauſe the product is uſed as an ointment. It cannot ſurely be ſuppoſed, that this is a juſt diviſion; or that the ſame proceſs or preparation can become chemical or not chemical, according to the intention to which it is applied, or to the form in which the product is uſed.

If vitriol of iron (that is, iron united with a certain acid) and any volatile alkaline ſalt, as that of hartſhorn or ſal ammoniac, be put together into water, in due proportions, the pungent ſmell of the volatile ſalt will be immediately ſuppreſſed; this ſalt uniting with the acid of the vitriol into a new compound, while the iron is ſeparated and thrown out. This is undoubtedly a chemical effect; and this effect will happen, wherever thoſe two ingredients meet together in a moiſt ſtate, whatever the form of the medicine be. It is obvious, therefore, that the galenical forms are by no means independent of chemiſtry; and that this ſcience extends to mixtures of the moſt ſimple kind.

The London college has very judiciouſly rejected this diviſion; a diviſion apparently derived from prejudice and ſuperficial knowledge, and which has been continued only in compliance with cuſtom. Pharmacy, in its full extent, is no other than a branch of chemiſtry, and the moſt ſimple pharmaceutical preparations are ſo far chemical, as they have any dependence upon the properties or relations of the materials.

PHARMACY, according to our definition, may be divided into THEORETICAL and PRACTICAL. Theoretical Pharmacy teaches the knowledge of the medicinal ſubſtances themſelves, their various properties, qualities, and relations to one another, and their general effects on the human body: Practical pharmacy, the ſkilful performance of the ſeveral proceſſes, or operations, by which they are adapted to particular uſes.

What is here called *theory* is not to be underſtood as conſiſting of ſpeculative truths, or philoſophical inveſtigations, calculated for explaining the phenomena, or teaching the rationale of the effects produced. The theory of pharmacy is the direct reſult of experiment and obſervation, or rather a general and comprehenſive view of experiments and facts themſelves; it may be termed SCIENTIFIC PHARMACY, in diſtinction from mere manual labour.

Scientific pharmacy includes all thoſe facts which relate to—the reduction of medicinal ſubſtances into different forms, and the forms in which particular ſubſtances are moſt commodiouſly or advantageouſly uſed—their relations to one another in regard to miſcibility, and the means by which thoſe, that of themſelves are not miſcible, may be made to unite—the ſeparation of the medicinal from the inactive matter, and of different kinds of medicinal matter from one another when combined together in the ſame ſubject, on the principle of one being diſſoluble in liquors which will not diſſolve the other, of one being exhalable by heat while the other remains fixt, &c.—the alterations which the medicinal parts themſelves undergo, in different circumſtances, and by different methods of treatment—the production of new properties and medicinal powers from the coalition of diſſimilar things—with many other particulars analogous to theſe.

It is obvious, that a perfect acquaintance with pharmacy, conſidered in this light, is eſſentially neceſſary to the due exerciſe of the art of phyſick. Without it, the preſcriber muſt often err in the choice of materials for the different forms of preparation or compoſition, or in adapting a manner of preparation to given materials; and often be deceived alſo in the medicinal effects, which the known powers of the ingredients, ſeparately, gave room to expect.

It would be inconſiſtent with the nature of a diſpenſatory, to wholly detach the ſcientific part of pharmacy from that which is more directly practical; for the ſcience gradually reſults in the courſe of the practical details. In this firſt part of the work it has been thought expedient to premiſe a ſummary view of the general elements of the art, both practical and ſcientific, that the reader may be the better prepared for the particular ſubjects and proceſſes, which follow in the ſecond and third parts.

* * *

CHAPTER II.

A general view of the properties and relations of medicinal ſubſtances.

SECT. I.

Vegetables.

VEGETABLES are organized bodies, containing, in certain veſſels, different kinds of ſubſtances, in which their medicinal virtues conſiſt, and which are found to differ greatly, not only in their quantity, but likewiſe in their quality, according to the age of the plant, the ſeaſon of the year, and the ſoil in which it is produced.

Thus ſome herbs in their infancy abound moſt with odoriferous matter; of which others yield little or none till they have attained to a more advanced age. Many fruits, in their immature ſtate, contain an auſtere acid juice, which by maturation is changed into a ſweet: others, as the orange, are firſt warm and aromatic, and afterwards, by degrees, become filled with a ſtrong acid. The common grain, and ſundry other ſeeds, when beginning to vegetate, are in taſte remarkably ſweet; yet the kernels of certain fruits prove, at the ſame period, extremely acrid. The roots of ſome of our indigenous plants, whoſe juice is, during ſummer, thin and watery, if wounded early in the ſpring, yield rich balſamic juices, which expoſed to a gentle warmth, ſoon concrete into ſolid gummy-reſins, ſuperior to many of thoſe brought from abroad. In open expoſures, dry ſoils, and fair warm ſeaſons, aromatic plants prove ſtronger and more fragrant, and fetid ones weaker in ſmell, than in the oppoſite circumſtances. To theſe particulars therefore due regard ought to be had in the collecting of plants for medicinal uſes.

It may be proper to obſerve alſo, that the different parts of one plant are often very different in quality from one another. Thus the bitter herb wormwood riſes from an aromatic root; and the narcotic poppy-head includes ſeeds which have no narcotic power. Theſe differences, though very obvious in the common culinary plants, do not ſeem to have been ſufficiently obſerved, or attended to, in the medicinal ones.

The medicinal juices of vegetables, and the active parts with which they are impregnated, may, generally, be extracted and ſeparated,

rated, by ſimple operations, without any alteration being made in their native qualities. They may, likewiſe, be variouſly altered and transformed, by operations not leſs ſimple. By fermentation and the power of fire, vegetables, and all the ſubſtances that exiſt in them (the pure watery part excepted) totally change their nature, and are converted or reſolved into products of another order. It will be proper to take a view of theſe productions firſt; ſome of them being ſubſervient to the ſeparation of the native principles, and to the better underſtanding of their properties.

1. *Productions from vegetables by fermentation.*

THE ſweet and aceſcent juices of fruits, infuſions of malted grain, and almoſt all vegetable juices or infuſions that are either ſimply ſweet or of a ſweetneſs mixed with acidity, on being kept in a place of temperate warmth, in a veſſel not cloſely ſtopt, ferment, grow turbid, throw off a large quantity of groſs matter, and are converted by degrees into a VINOUS LIQUOR; from which may be ſeparated, by proceſſes hereafter deſcribed, a pure INFLAMMABLE SPIRIT.

It is needleſs to obſerve, how different theſe productions are, in their medicinal as well as their more obvious properties, from the liquors that afforded them. The native juices of fruits attenuate the animal fluids, and relax the ſolids, ſo as to prove in ſome caſes uſeful aperient medicines, and to occaſion, when imprudently taken, dangerous fluxes; whereas the vinous and ſpirituous liquors, produced from them by fermentation, have the oppoſite effects, conſtringing the ſolids, and thickening or coagulating the fluids.

In vinous liquors there are great diverſities, independently of their being more or leſs watery; for ſome of the native qualities of vegetable juices and infuſions, as colour, flavour, viſcidity, &c. often remain in the wine, not being totally ſubduable by that degree of fermentation by which the liquor is rendered vinous: but of theſe diverſities the ſpirit is never found to partake: this, ſeparated from the wine and properly purified, is always one and the ſame thing, from whatever kind of vegetable liquor it was produced.

Beſides the groſs matter thrown off during the fermentation, there ſeparates from ſundry wines, after the fermentation is completed, another kind of ſubſtance. The ſides and bottom of the caſk become gradually incruſtated with a ſaline concrete, called TARTAR, of an acid taſte, and of a reddiſh or white colour, according to that of the wine. The colour is adventitious to the ſalt, for the tartar may be purified from it by ſolution in water: when thus purified, the tartar of all wines is found to be the ſame.

There is ſeparated alſo, in fermentation, a ſubſtance of a much more active nature than any of the preceding. When the fermentation is at its height, a ſubtile, pungent, elaſtic, incoercible VAPOUR is diſcharged; which, when copiouſly accumulated in cloſe rooms, extinguiſhes fire, and inſtantaneouſly ſuffocates animals, without producing any apparent diſeaſe, or any injury that can be perceived upon diſſection. Boerhaave ſays he does not remember that ſo immediate, mortal, and ſubtile a poiſon has been hitherto diſcovered: that if a large veſſel, full of the juice of grapes in high fermentation, ſhould diſcharge its accumulated vapour through a ſmall orifice, and a ſtrong healthy man ſhould draw in the vapour at his noſtrils, he would inſtantly fall down dead; or if he received but little thereof, become apoplectic; or, if ſtill leſs, would remain an ideot during life, or become paralytic: and that theſe accidents befal thoſe who imprudently remain long in cloſe vaults where large quantities are fermenting. It may be obſerved that this vapour, when not collected in ſuch a quantity as to extinguiſh a ſmall flame, as that of a candle, is generally not dangerous, or at leaſt not mortal to animals.

There are ſeveral ſubſtances, of themſelves not ſuſceptible of fermentation, which nevertheleſs may be brought into it by the admixture of thoſe that are; as by adding to them, along with a proper quantity of water, a portion of the yeaſt or head thrown up to the ſurface of fermenting liquors. To this expedient recourſe is ſometimes had for unlocking the texture of certain compact vegetable matters, in order to enable them to give out more readily ſome of their medicinal principles. In theſe caſes, the fermentation muſt be continued but for a little time; leſt the reſolution of the ſubject ſhould proceed beyond the intended limits, and the principles, expected from it, be converted into other products.

The fermentable juices of fruits, boiled till they become thick, are found to be indiſpoſed to ferment, and this not only in their thick ſtate, but when diluted again with water; though there appears to be ſcarcely any other alteration produced in them by the boiling. Hence liquids, prone to fermentation, may thus be preſerved. How far this diminution of their fermentability may affect their medical virtues, is not as yet clear.

THE degree or the ſpecies of fermentation, by which wines and inflammable ſpirits are produced, is called *vinous fermentation.* If the proceſs be further protracted, more groſs matter is thrown off, and new changes ſucceed, but in a ſlower and leſs tumultuary manner than before. The heating inebriating wine becomes by degrees a cooling acid VINEGAR, which ſeems to counteract the effects of the other: the more the wine abounded with inflammable ſpirit, the more does the vinegar abound with uninflammable acid.

There are, however, certain qualities of vegetables, which are not completely ſubdued even by this ſecond ſtage of fermentation; ſome vinegars being apparently more coloured, and containing more of an oily and viſcid matter than others. By adding to the fermentable liquor ſubjects of other kinds, the qualities both of wines and vinegars may be ſtill further diverſified, ſo as to adapt them to particular medicinal uſes.

It is obſervable, that though the acetous fermentation will always ſucceed the vinous, unleſs induſtriouſly prevented, yet it is not always preceded thereby; for many, perhaps all, fermentable liquors may be made to paſs to the acetous ſtate, without any intermediate period of true vinoſity.

If the proceſs be ſtill further continued, further changes take place. The matter putrefies: and at length, what little liquor remains unevaporated, is found to be mere water, and the ſolid ſubſtance at the bottom appears to be the ſame with common mould.

This is reckoned by the chemiſts one of the ſtages of fermentation, and diſtinguiſhed by the name of the *putrefactive ſtage.* It is far more general in its object than the other two; every vegetable matter being ſuſceptible of putrefaction, but ſome particular kinds only being adapted to vinous or acetous fermentation.

Putrefaction diſcovers one difference in vegetables, which, though not taken notice of, ſo far as I know, by any writer, ſeems worthy of being remarked. The generality of vegetables rot and turn to mould, without yielding any very offenſive ſmell from the beginning to the end of the reſolution: but there are ſome which emit, throughout the whole proceſs, a ſtrong fetor, very nearly of the ſame kind with that which accompanies the putrefaction of animal ſubſtances.

2. *Productions from vegetables by fire.*

Fire, the other grand agent in the reſolution of bodies, produces in vegetables decompoſitions of a different kind. Its general effects are the following.

Vegetable ſubſtances, burnt in the open air, are reduced partly into ASHES, and partly into FLAME and SMOKE; which laſt, condenſed in long canals or otherwiſe, forms a nauſeous bitter black SOOT. In the burning of moſt vegetables, an acid vapour accompanies the ſmoke; but the ſoot is never found to partake of it.

Vegetables urged with a red heat in cloſe veſſels (the veſſel containing the ſubject being made to communicate with another placed beyond the action of the fire for receiving the matters forced out by the heat) give over a WATERY LIQUOR called phlegm; an ACID LIQUOR called ſpirit; an elaſtic incoercible vapour, which appears to be AIR, and to which an exit muſt be occaſionally allowed, leſt it burſt the veſſels or blow off the receiver; a *thin* OIL, and, at length, a very *thick dark-coloured oil*, both which are of an acrimonious taſte, and a burnt fetid ſmell, whence they are called empyreumatic oils. There remains behind a black COAL, not diſſoluble in any kind of liquors, not ſuſceptible of putrefaction, not alterable by the moſt vehement degree of fire, ſo long as the air is excluded, but which, on admitting air to it, burns, without flaming, and with little or no ſmoke, and leaves a very ſmall quantity of white aſhes.

The white aſhes of vegetables, infuſed or boiled in water, impart to it a pungent ſaline ſubſtance, called FIXT ALKALINE SALT, which may be ſeparated in a ſolid form by evaporating the water. The remaining part of the aſhes, which is by far the largeſt in quantity, is a pure EARTH, differing from that which is the reſult of putrefaction, in being readily diſſoluble by every acid liquor, while the other is not acted upon by an acid.

Such is the general analyſis of vegetables by fire. But there are ſome vegetables, which, as they ſeem to ſhew, during putrefaction, ſome analogy in their matter with that which conſtitutes animal bodies, diſcover alſo a like analogy in the preſent reſolution, yielding little or no acid; and, inſtead of a fixt alkaline ſalt which remains in the aſhes, affording a VOLATILE ALKALINE SALT which ariſes along with the aqueous and oily principles.

ALKALINE ſalts, and acid or ſour ſubſtances, are looked upon as being oppoſite in their nature to one another. Moſt of the bodies, which are diſſoluble in alkaline liquors, are precipitated or thrown out from the ſolution on the addition of an acid; and moſt of thoſe, which are diſſoluble in acids, are in like manner precipitated by alkalies. If an acid and an alkali be directly mixed together, there generally enſues an effervеſcence or tumultuary diſcharge of air-bubbles; though alkalies, both fixt and volatile, may be ſo prepared as to make no effervеſcence with acids, and in this caſe they are far more pungent than in their common ſtate.

In all caſes, the alkali and acid, uniting together, compoſe a new body, called a NEUTRAL SALT, which has neither the ſourneſs of the one ingredient, nor the peculiar pungency of the other, and which will not diſſolve thoſe ſubſtances which either the acid or the alkali ſeparately would diſſolve.

To theſe characters, it may be added, that alkaline ſalts change the colour of blue flowers or their infuſions, as of violets, to a green, and acids to a red, while the neutral compound, formed by the coalition of the two, makes no alteration in the colour.

It muſt be obſerved, however, that to change blue flowers to a green, is not univerſally a mark of alkalies, for ſome ſolutions of earthy bodies in acids have the ſame effect: theſe laſt may be diſtinguiſhed from alkalies, by adding to them a known alkali, which will immediately precipitate the earth, and form a neutral compound with the acid.

Fixt alkaline ſalts, perfectly purified, appear to be one and the ſame, from whatever kind of vegetable they were produced; thoſe of ſome marine plants excepted, of which hereafter. In volatile alkalies, and in the pure earthy part of the aſhes, there appears to be, reſpectively, the like identity.

Empyreumatic oils differ ſomewhat in the degree of acrimony and fetidneſs, and the acid ſpirits differ in degree of ſtrength, or in the quantity of water with which they are diluted; how far they may differ in any other reſpects, is little known, theſe preparations having been rarely uſed or examined.

It may be obſerved, that the alkaline ſalts, both of the fixt and of the volatile kind, are entirely creatures of the fire, being never found to exiſt naturally in any vegetable: the oil, doubtleſs, præexiſted in the ſubject, but owes its acrimony and fetidneſs to the fire; for the moſt mild and inſipid oils receive the ſame qualities on being urged with the ſame degree of heat: the acid, which is likewiſe naturally contained in vegetable ſubjects, proves always tainted, in the preſent proceſs, with the ill ſmell and taſte of the oil that accompanies it; but whether the acid itſelf ſuffers any change in its nature, is unknown.

When chemiſtry began firſt to be formed into a rational ſcience, and to examine the component parts and internal conſtitution of bodies, it was imagined, that this reſolution of vegetables by fire, diſcovering to us all their active principles, unclogged and unmixed with one another, would afford the ſureſt means of judging of their medicinal powers. But, on proſecuting theſe experiments, it was ſoon found that they were inſufficient for that end: that the analyſes of poiſonous and eſculent plants agreed often as nearly with one another as the analyſes of one plant: that by the action of a burning heat, two principles of vegetables are not barely ſeparated, but altered, tranſpoſed, and combined into new forms; inſomuch that it was impoſſible to know in what form they exiſted, and with what qualities they were endowed, before theſe changes and tranſpoſitions happened. If, for example, thirty-two ounces of a certain vegetable ſubſtance be found to yield ten ounces and a half of acid liquor, above one ounce and five drams of oil, and three drams and a half of fixt alkaline ſalt; what idea can this analyſis give of the medicinal qualities of *gum Arabic?*

3. *Subſtances naturally contained in vegetables, and ſeparable by art without alteration of their native qualities.*

1. Groſs oils.

Gross oils abound chiefly in the kernels of fruits and in certain ſeeds; from which they are commonly extracted by expreſſion, and hence are diſtinguiſhed by the name of *expreſſed oils.* They are contained alſo in all the parts of all vegetables that have been examined, and may be forced out by vehemence of fire; but here their qualities are greatly altered in the proceſs by which they are extracted or diſcovered, as we have ſeen under the foregoing head.

Theſe oils, in their common ſtate, are not diſſoluble either in vinous ſpirits or in water, though, by means of certain intermedia, they may be united both with the one and the other. Thus a ſkilful interpoſition of ſugar renders them miſcible with water into what are called lohochs and oily draughts: by the intervention of gum or mucilage they unite with water into a milky fluid: by alkaline ſalts they are changed into a ſoap, which is miſcible both with watery and ſpirituous liquors, and is perfectly diſſolved by the latter into an uniform tranſparent fluid. The addition of any acid to the ſoapy ſolution abſorbs the alkaline ſalt; and the oil, which of courſe ſeparates, is found to have undergone this remarkable change, that it now diſſolves without any intermedium, in pure ſpirit of wine.

Expreſſed oils, expoſed to the cold, loſe greatly their fluidity: ſome of them, in a ſmall degree of cold, congeal into a conſiſtent maſs. Kept for ſome time in a warm air, they become thin and highly rancid: their ſoft, lubricating, and relaxing quality is changed into a ſharp acrimonious one: and in this ſtate, inſtead of allaying, they occaſion irritation; inſtead of obtunding corroſive humours, they corrode and inflame. Theſe oils are liable to the ſame noxious alteration while contained in the original ſubject: hence the rancidity which the oily ſeeds and kernels, as almonds and thoſe called the cold ſeeds, are ſo liable to contract in keeping. Nevertheleſs on triturating theſe ſeeds or kernels with water, the oil, by the intervention of the other matter of the ſubject, unites with the water into an emulſion or milky liquor, which, inſtead of growing rancid, turns ſour on ſtanding.

In the heat of boiling water, and even in a degree of heat as much exceeding this as the heat of boiling water does that of the human body, theſe oils ſuffer little diſſipation of their parts. In a greater heat, they emit a pungent vapour, ſeemingly of the acid kind; and when ſuffered to grow cold again, they are found to have acquired a greater degree of conſiſtence than they had before, together with an acrid taſte. In a heat approaching to ignition, in cloſe veſſels, the greateſt part of the oil ariſes in an empyreumatic ſtate, a black coal remaining behind.

2. Groſs ſebaceous matter.

FROM the kernels of ſome fruits, as that of the chocolate nut, we obtain, inſtead of a fluid oil, a ſubſtance of butyraceous conſiſtence; and from others, as the nutmeg, a ſolid matter as firm as tallow. Theſe concretes are moſt commodiouſly extracted by boiling the ſubject in water; the ſebaceous matter, liquefied by the heat, ſeparates and ariſes to the ſurface, and reſumes its proper conſiſtence as the liquor cools.

The ſubſtances of this claſs have the ſame general properties with expreſſed oils, but are leſs diſpoſed to become rancid in keeping than moſt of the common fluid oils. It is ſuppoſed by the chemiſts, that their thick conſiſtence is owing to a larger admixture of an acid principle: for, in their reſolution by fire, they yield a vapour more ſenſibly acid than the fluid oils; and fluid oils, by the admixture of concentrated acids, are reduced to a thick or ſolid maſs.

3. Eſſential oils.

ESSENTIAL oils are obtained only from thoſe vegetables, or parts of vegetables, that are conſiderably odorous. They are the direct principle, in which the odour, and oftentimes the warmth, pungency, and other active powers of the ſubject, reſide; whence their name of eſſences or eſſential oils.

Eſſential oils unite with rectified ſpirit of wine, and compoſe with it one homogene tranſparent fluid; though ſome of them require for this purpoſe a much larger proportion of the ſpirit than others. Water alſo, though it does not diſſolve their whole ſubſtance, may be made to imbibe ſome portion of their more ſubtile matter, ſo as to become conſiderably impregnated with their flavour: by the admixture of ſugar, gum, the yolk of an egg, or alkaline ſalts, they are made totally diſſoluble in water. Digeſted with volatile alkalies, they undergo various changes of colour, and ſome of the leſs odorous acquire conſiderable degrees of fragrance; whilſt fixt alkalies univerſally impair their odour.

In the heat of boiling water, theſe oils totally exhale; and on this principle they are commonly extracted from ſubjects that contain them; for no other fluid, that naturally exiſts in vegetables, is exhalable by that degree of heat, except the aqueous moiſture, from which greateſt part of the oil is eaſily ſeparated. Some of theſe oils ariſe with a much leſs heat, a heat little greater than that in which water begins viſibly to evaporate. In their reſolution by a burning heat, they differ little from expreſſed oils.

Eſſential oils, expoſed for ſome time to a warm air, ſuffer an alteration very different from that which the expreſſed undergo.

Inſtead of growing thin, rancid, and acrimonious, they gradually become thick, and at length harden into a ſolid brittle concrete; with a remarkable diminution of their volatility, fragrancy, pungency, and warm ſtimulating quality. In this ſtate, they are found to conſiſt of two kinds of matter; a fluid oil, volatile in the heat of boiling water, and nearly of the ſame quality with the original oil; and of a groſſer ſubſtance which remains behind, not exhalable without a burning heat, or ſuch a one as changes its nature, and reſolves it into an acid, an empyreumatic oil, and a black coal.

The admixture of a concentrated acid inſtantly produces, in eſſential oils, a change nearly ſimilar to that which time effects. In making theſe kinds of commixtures, the operator ought to be on his guard: for when a ſtrong acid, particularly that of nitre (of which hereafter) is poured haſtily into an eſſential oil, a great heat and ebullition enſue, and often an exploſion happens, or the mixture burſts into flame. The union of expreſſed oils with acids is accompanied with much leſs conflict.

4. Concrete eſſential oil.

Some vegetables, as roſes and elecampane roots, inſtead of a fluid eſſential oil, yield a ſubſtance poſſeſſing the ſame general properties, but of a thick or ſebaceous conſiſtence. This ſubſtance appears to be of as great volatility, and ſubtility of parts, as the fluid oils: it equally exhales in the heat of boiling water, and concretes upon the ſurface of the collected vapour. The total exhalation of this matter, and its concreting again into its original conſiſtent ſtate, without any ſeparation of it into a fluid and a ſolid part, diſtinguiſhes it from eſſential oils that have been thickened or indurated by age or by acids.

5. Camphor.

Camphor is a ſolid concrete, obtained chiefly from the woody parts of certain Indian trees. It is volatile like eſſential oils, and ſoluble both in oils and inflammable ſpirits: it unites freely with water by the intervention of gum, but very ſparingly and imperfectly by the other intermedia that render oils miſcible with watery liquors. It differs from the ſebaceous as well as fluid eſſential oils, in ſuffering no ſenſible alteration from long keeping; in being totally exhalable, not only by the heat of boiling water, but in a warm air, without any change or ſeparation of its parts, the laſt particle that remains unexhaled appearing to be of the ſame nature with the original camphor; in its receiving no empyreumatic impreſſion, and ſuffering no reſolution, from any degree of fire to which it can be expoſed in cloſe veſſels, though readily combuſtible in the open air; in being diſſolved by concentrated acids into a liquid form; and in ſeveral other properties which it is needleſs to ſpecify in this place.

6. Reſin.

Essential oils, indurated by age or acids, are called reſins. When the indurated maſs has been expoſed to the heat of boiling water, till its more ſubtile part, or the pure eſſential oil that remained in it, has exhaled, the groſs matter, left behind, is likewiſe called reſin. We find, in many vegetables, reſins analogous both to one and the other of theſe concretes; ſome containing a ſubtile oil, ſeparable by the heat of boiling water; others containing nothing that is capable of exhaling in that heat.

Reſins in general diſſolve in rectified ſpirit of wine, though ſome of them much more difficultly than others: it is chiefly by means of this diſſolvent, that they are extracted from the ſubjects in which they are contained. They diſſolve alſo in oils both expreſſed and eſſential; and may be united with watery liquors by means of the ſame intermedia which render the fluid oils miſcible with water. In a heat leſs than that of boiling water, they melt into an oily fluid, and in this ſtate they may be incorporated one with another. In their reſolution by fire, in cloſe veſſels, they yield a manifeſt acid, and a large quantity of empyreumatic oil.

7. Gum.

Gum differs from the foregoing ſubſtances, in being uninflammable: for though it may be burnt to a coal, and thence to aſhes, it never yields any flame. It differs remarkably alſo in the proportion of the principles into which it is reſolved by fire; the quantity of empyreumatic oil being far leſs, and that of acid far greater. In the heat of boiling water, it ſuffers no diſſipation: nor does it liquefy like reſins; but continues unchanged, till the heat is ſo far increaſed as to ſcorch or turn it to a coal.

By a little quantity of water, it is ſoftened into a viſcous adheſive maſs, called mucilage: by a larger quantity it is diſſolved into a fluid, which proves more or leſs glutinous, according to the proportion of gum. It does not diſſolve in vinous ſpirits, or in any kind of oil: nevertheleſs, when ſoftened with water into a mucilage, it is eaſily miſcible both with the fluid oils and with reſins, which, by theſe means, become ſoluble in watery liquors, along with the gum, and are thus excellently fitted for medicinal purpoſes.

This elegant method of uniting oils with aqueous liquors, which has been kept a ſecret in few hands, appears to have been known to Dr. Grew. "I took (ſays he) oil of anniſeeds, and pouring it "upon *another body*, I ſo ordered it, that it was thereby turned into "a perfect milk-white balſam or butter; by which means the oil "became mingleable with any vinous or watery liquor; eaſily and "inſtantaneouſly diſſolving therein, in the form of a milk. And "note, this is done without the leaſt alteration of the ſmell, taſte,

" nature or operation of the ſaid oil. By ſomewhat the like means " any other ſtillatitious oil may be transformed into a milk-white " butter, and in like manner be mingled with water or any other " liquor; which is of various uſe in medicine, and what I find " oftentimes very convenient and advantageous to be done." (*Grew*, *of mixture*, *chap*. v. *inſt*. i. § 7.) This enquiry has lately been further proſecuted, in the firſt volume of the Medical Obſervations publiſhed by a ſociety of phyſicians in London; where a variety of experiments is related, of rendering oils both eſſential and expreſſed, and different unctuous and reſinous bodies, ſoluble in water by the mediation of gum.

As oily and reſinous ſubſtances are thus united to water by the means of gum, ſo gums may in like manner be united to ſpirit of wine by the intervention of reſins and eſſential oils; though the ſpirit does not take up near ſo much of the gum, as water does of the oil or reſin.

Acid liquors, though they thicken pure oils or render them conſiſtent, do not impede the diſſolution of gum, or of oils blended with gum. Alkaline ſalts, on the contrary, both fixt and volatile, though they render pure oils diſſoluble in water, prevent the ſolution of gum, and of mixtures of gum and oil. If any pure gum be diſſolved in water, the addition of any alkali will occaſion the gum to ſeparate, and fall to the bottom in a conſiſtent form: if any oily or reſinous body was previouſly blended with the gum, this alſo ſeparates, and either ſinks to the bottom, or riſes to the top, according to its gravity.

8. Gum-reſin.

By gum-reſin is underſtood a mixture of gum and reſin. Many vegetables contain mixtures of this kind, in which the component parts are ſo intimately united, with the interpoſition perhaps of ſome other matter, that the compound, in a pharmaceutical view, may be conſidered as a diſtinct kind of principle; the whole maſs diſſolving almoſt equally in aqueous and in ſpirituous liquors; and the ſolutions being not turbid or milky, like thoſe of the groſſer mixtures of gum and reſin, but perfectly tranſparent. Such is the aſtringent matter of biſtort root, and the bitter matter of gentian. It were to be wiſhed that we had ſome particular name for this kind of matter; as the term gum-reſin is appropriated to the groſſer mixtures, in which the gummy and reſinous parts are but looſely joined, and eaſily ſeparable from one another.

9. Saline matter.

Of the ſaline juices of vegetables there are different kinds, which have hitherto been but little examined: the ſweet and acid ones are the moſt plentiful, and thoſe which are the moſt known.

Theſe juices, expoſed to a heat equal to that of boiling water, ſuffer generally no other change than the evaporation of their watery moiſture; the ſaline matter remaining behind, along with ſuch of the other not volatile parts as were blended with it in the juice. From many, after the exhalation of great part of the water, the ſaline matter gradually ſeparates in keeping, and concretes into little ſolid maſſes, leaving the other ſubſtances diſſolved or in a moiſt ſtate: from others, no means have yet been found of obtaining a pure concrete ſalt.

Theſe ſalts diſſolve not only in water like other ſaline bodies, but many of them, particularly the ſweet, in rectified ſpirit alſo. The groſs oily and gummy matter, with which they are almoſt always accompanied in the ſubject, diſſolves freely along with them in water, but is by ſpirit in great meaſure left behind. Such heterogeneous matters, as the ſpirit takes up, are almoſt completely retained by it, while the ſalt concretes; but of thoſe, which water takes up, a conſiderable part always adheres to the ſalt. Hence eſſential ſalts, as they are called, prepared in the common manner from the watery juices of vegetables, are always found to partake largely of the other ſoluble principles of the ſubject; whilſt thoſe extracted by ſpirit of wine prove far more pure. By means of rectified ſpirit, ſome productions of this kind may be excellently freed from their impurities; and perfect ſaccharine concretions obtained from many of our indigenous ſweets.

There is another kind of ſaline matter, obtained from ſome reſinous bodies, particularly from benzoine, of a different nature from the foregoing, and ſuppoſed by ſome of the chemiſts to be a part of the eſſential oil of the reſin, coagulated by an acid, with the acid more predominant, or more diſengaged, than in the other kinds of coagulated or indurated oils. Theſe concretes diſſolve both in water and in vinous ſpirits, though difficultly and ſparingly in both: they ſhew ſome marks of acidity, have a conſiderable ſhare of ſmell like that of the reſin from which they are obtained, exhale in a heat equal to that of boiling water or a little greater, and prove inflammable in the fire.

General obſervations on the foregoing principles.

1. Essential oils, as already obſerved, are obtainable only from a few vegetables, and camphor from a much ſmaller number: but groſs oil, reſin, gum, and ſaline matter, appear to be common, in greater or leſs proportion, to all; ſome abounding more with one, and others with another.

2. The ſeveral principles are in many caſes intimately combined; ſo as to be extracted together from the ſubject, by thoſe diſſolvents, in which ſome of them, ſeparately, could not be diſſolved. Hence watery infuſions, and ſpirituous tinctures of a plant contain, reſpectively, more than water or ſpirit is the proper diſſolvent of.

3. After a plant has been ſufficiently infuſed in water, all that ſpirit extracts from the reſiduum may be looked upon as conſiſting wholly of ſuch matter as directly belongs to the action of ſpirit. And contrariwiſe, when ſpirit is applied firſt, all that water extracts afterwards may be looked upon as conſiſting only of that matter of which water is the direct diſſolvent.

4. If a vegetable ſubſtance, containing all the principles we have been ſpeaking of, be boiled in water, the eſſential oil, whether fluid or concrete, and the camphor, and volatile eſſential ſalt, will gradually exhale with the ſteam of the water, and may be collected by receiving the ſteam in proper veſſels placed beyond the action of the heat. The other principles not being volatile in this degree of heat, remain behind: the groſs oil and ſebaceous matter float on the top: the gummy and ſaline ſubſtance, and a part of the reſin, are diſſolved by the water, and may be obtained in a ſolid form by ſtraining the liquor, and expoſing it to a gentle heat till the water has exhaled. The reſt of the reſin, ſtill retained by the ſubject, may be extracted by ſpirit of wine, and ſeparated in its proper form, by exhaling the ſpirit. On theſe foundations, moſt of the ſubſtances contained in vegetables may be extracted, and obtained in a pure ſtate, however they may be compounded together in the ſubject.

5. Sometimes one or more of the principles is found naturally diſengaged from the others, lying in diſtinct receptacles within the ſubject, or extravaſated and accumulated on the ſurface. Thus, in the dried roots of angelica, cut longitudinally, the microſcope diſcover veins of reſin. In the flower-cups of hypericum, and the leaves of the orange tree, tranſparent points are diſtinguiſhed by the naked eye, which, on the firſt view, ſeem to be holes, but, on a cloſer examination, are found to be little veſicles filled with eſſential oil. In the bark of the fir, pine, larch, and ſome other trees, the oily receptacles are extremely numerous, and ſo copiouſly ſupplied with the oily and reſinous fluid, that they frequently burſt, eſpecially in the warm climates, and diſcharge their contents in great quantities. The acacia tree in Egypt, and the plum and cherry among ourſelves, yield almoſt pure gummy exudations. From a ſpecies of aſh is ſecreted the ſaline ſweet ſubſtance manna; and the only kind of ſugar with which the ancients were acquainted, appears to have been a natural exudation from the cane.

6. The foregoing principles are, ſo far as is known, all that naturally exiſt in vegetables; and all that art can extract from them, without ſuch operations as change their nature, and deſtroy their original qualities. In one or more of theſe principles, the colour, ſmell, taſte, and medicinal virtues of the ſubject, are almoſt always found concentrated.

7. In ſome vegetables, the whole medicinal activity reſides in one principle. Thus, in ſweet almonds, the only medicinal prin-

ciple is a groſs oil; in horſe-radiſh root, an eſſential oil; in jalap root, a reſin; in marſhmallow root, a gum; in the leaves of ſorrel, a ſaline acid ſubſtance.

8. Others have one kind of virtue reſiding in one principle, and another in another. Thus Peruvian bark has an aſtringent reſin, and a bitter gum; wormwood, a ſtrong flavoured eſſential oil, and a bitter gum-reſin.

9. The groſs inſipid oils and ſebaceous matters, the ſimple inſipid gums, and the ſweet and acid ſaline ſubſtances, appear to nearly agree, reſpectively, among themſelves, in their medicinal qualities, as well as in their pharmaceutic properties.

10. But eſſential oils, reſins, and gum-reſins, differ greatly in different ſubjects. As eſſential oils are univerſally the principle of odour in vegetables, it is obvious that they muſt differ in this reſpect as much as the ſubjects from which they are obtained. Reſins frequently partake of the oil, and conſequently of the differences depending thereon; with this further diverſity, that the groſs reſinous part often contains other powers than thoſe which reſide in oils. Thus from wormwood a reſin may be prepared, containing not only the ſtrong ſmell and flavour, but likewiſe the whole bitterneſs of the herb; from which laſt quality the oil is entirely free. The bitter, aſtringent, purgative and emetic virtues of vegetables reſide generally in different ſorts of reſinous matter, either pure, or blended with gummy and ſaline parts; of which kind of combinations, there are many ſo intimate, that the component parts can ſcarcely be ſeparated from one another, the whole compound diſſolving almoſt equally in aqueous and ſpirituous menſtrua.

11. There are ſome ſubſtances alſo, which, from their being totally diſſoluble in water, and not at all in ſpirit, may be judged to be mere gums; but which, nevertheleſs, poſſeſs virtues never to be found in the ſimple gums. Such are the aſtringent gum called acacia, and the purgative gum extracted from aloes.

12. It is ſuppoſed that vegetables contain certain ſubtile principles or preſiding ſpirits, different in different plants, of too great tenuity to be collected in their pure ſtate, and of which oils, gums, and reſins are only the matrices or vehicles. This enquiry is foreign to the purpoſes of pharmacy, which is concerned only about groſſer and more ſenſible objects. When we obtain from an odoriferous plant an eſſential oil, containing in a ſmall compaſs the whole fragrance of a large quantity of the ſubject, our intentions are equally anſwered, whether the ſubſtance of the oil be the direct odorous matter, or whether it have diffuſed through it a fragrant principle more ſubtile than itſelf. And, when this oil, in long keeping, loſes its odour, and becomes a reſin, it is equal in regard to the preſent conſiderations, whether the effect happen from the avolation of a ſubtile principle, or from a change produced in the ſubſtance of the oil itſelf

SECT. II.

Animals.

IN animal bodies we find certain ſubſtances, which have a great reſemblance, in their general properties, to thoſe of the vegetable kingdom.

Animal oils and fats, like the groſs oils of vegetables, are not, of themſelves, diſſoluble either in water or vinous ſpirits; but they may be united with water by the intervention of gum or mucilage; and moſt of them may be changed into ſoap, and thus rendered miſcible with ſpirit, as well as water, by fixt alkaline ſalts.

The odorous matter of ſome odoriferous animal ſubſtances, as muſk, civet, caſtor, is, like eſſential oil, ſoluble in ſpirit of wine, and volatile in the heat of boiling water. Cartheuſer relates, that from caſtor an actual eſſential oil has been obtained, in a very ſmall quantity, but of an exceedingly ſtrong diffuſive ſmell.

The veſicating matter of cantharides, and thoſe parts of ſundry animal ſubſtances, in which their peculiar taſtes reſide, are diſſolved by rectified ſpirit, and ſeem to have ſome analogy with reſins and gummy reſins.

The gelatinous principle of animals, like the gum of vegetables, diſſolves in water, but not in ſpirit or in oils: like gums alſo, it renders oils and fats miſcible with water into a milky liquor.

Some inſects, particularly the ant, are found to contain an acid juice, which approaches nearly to the nature of vegetable acids.

There are however ſundry animal juices, which differ greatly, even in theſe general kinds of properties, from the correſponding ones of vegetables. Thus animal ſerum, which appears analogous to vegetable gummy juices, has this remarkable difference, that though it mingle uniformly with cold or warm water, yet, on conſiderably heating the mixture, the animal matter ſeparates from the watery fluid, and concretes into a ſolid maſs. Some have been apprehenſive, that the heat of the body, in ſome diſtempers, might riſe to ſuch a degree, as to produce this dangerous or mortal concretion of the ſerous humours: but the heat requiſite for this effect is greater than the human body appears capable of ſuſtaining; being nearly about the middle point between the greateſt human heat commonly obſerved and that of boiling water.

THE ſoft and fluid parts of animals are ſtrongly diſpoſed to run into putrefraction: they putrefy much ſooner than vegetable matters, and, when corrupted, prove more offenſive.

This proceſs takes place, in ſome degree, in the bodies of living animals; as often as the juices ſtagnate long, or are prevented, by an obſtruction of the natural emunctories, from throwing off their more volatile and corruptible parts.

The doctrine of putrefaction, both in living and in dead animals, has received great light from the curious and intereſting experiments and obſervations of Dr. Pringle. He obſerves, that if the corruption be great and ſudden, a fever or a flux enſue; but that if the accumulation of corrupted matter be ſo ſlow, that the body becomes habituated to the putrefaction, a ſcurvy prevails. Hence the frequency of this laſt diſtemper, in long voyages, on board unventilated ſhips, from corrupted air and proviſions; in marſhy countries, from ſimilar cauſes; and in a leſs degree, in all northern climates, in moiſt ſituations, from a want of due perſpiration.

During putrefaction, a quantity of air is generated; all the humours become gradually thinner, and the fibrous parts more lax and tender. Hence the tympany, which ſucceeds the corruption of any of the viſcera, or the imprudent ſuppreſſion of dyſenteries by aſtringents; and the weakneſs and laxity of the veſſels obſervable in ſcurvies, &c.

The craſſamentum of human blood changes by putrefaction into a dark livid-coloured liquor; a few drops of which tinge the ſerum of a tawny hue; like that of the ichor of ſores and dyſenteric fluxes, and of the white of the eye, the ſaliva, the ſerum of blood drawn from a vein, and that which oozes from a bliſter, in deep ſcurvies, and the advanced ſtate of malignant fevers.

The putrid craſſamentum changes a large quantity of recent urine to a flame-coloured water, ſo common in fevers and in the ſcurvy. This mixture, after ſtanding an hour or two, gathers a cloud, reſembling what is ſeen in the crude water of acute diſtempers; with ſome oily matter on the ſurface, like the ſcum which floats on ſcorbutic urine.

The ſerum of blood depoſits, in putrefaction, a ſediment reſembling well-digeſted pus, and changes to a faint olive green. A ſerum, ſo far putrefied as to become green, is perhaps never to be ſeen in the veſſels of living animals: but in dead bodies this ſerum is to be diſtinguiſhed by the green colour which the fleſh acquires in corrupting. In ſalted meats, this is commonly aſcribed to the brine, but erroneouſly; for that has no power of giving this colour, but only of qualifying the taſte, and in ſome degree the ill effects of corrupted aliments. In foul ulcers, and other ſores, where the ſerum is left to ſtagnate long, the matter is likewiſe found of this colour, and is then always acrimonious.

The putrefaction of animal ſubſtances is prevented or retarded by all ſaline matters, even by the fixt and volatile alkaline ſalts, which have generally been ſuppoſed to produce a contrary effect. Of all the ſalts that have been made trial of, ſea ſalt ſeems to reſiſt putrefaction the leaſt: in ſmall quantities, it even accelerates the proceſs. The vegetable bitters, as chamomile flowers, are much ſtronger antiſeptics, not only preſerving fleſh long uncorrupted, but likewiſe ſomewhat correcting it when putrid: the mineral acids have this laſt effect in a more remarkable degree. Vinous ſpirits, aromatic and warm ſubſtances, moſt of the diaphoretic drugs, and the acrid plants falſely called alkaleſcent, as ſcurvygraſs and horſeradiſh, are alſo found to reſiſt putrefaction; and ſome of the abſorbent earths, as chalk, to promote it.

It is obſervable, that notwithſtanding the ſtrong tendency of animal matters to putrefaction, yet broths made from them with the admixture of vegetables, inſtead of putrefying, turn ſour. Dr. Pringle finds, that when animal fleſh in ſubſtance is beaten up with bread, or other farinaceous vegetables, and a proper quantity of water, into the conſiſtence of a pap, this mixture likewiſe, kept in a heat equal to that of the human body, grows in a little time ſour; while the vegetable matters, without the fleſh, ſuffer no ſuch change. (See the appendix to Dr. Pringle's obſervations on the diſeaſes of the army.)

ANIMAL ſubſtances, burnt in the open air, are reſolved, like vegetables, into ſoot and aſhes, but, with this difference, that no fixt alkaline ſalt can be obtained from the aſhes, and that no acid vapour accompanies the ſmoke. They emit, during the burning, a fetid ſmell, of a peculiar kind, by which animal ſubſtances may be diſtinguiſhed at once from all thoſe of the vegetable kingdom. In cloſe veſſels, they give over, after the watery moiſture, a volatile alkaline ſalt, which either concretes into a ſolid form, or diſſolves in the water, and thus compoſes what is called ſpirit; together with an empyreumatic oil, of a more fetid kind than the oils of vegetables: without the leaſt footſtep of acid throughout the whole proceſs. A black coal remains, which, in the open air, burns into white aſhes void of ſaline matter.

It was obſerved in the preceding ſection, that ſome few vegetables, in this reſolution of them by fire, diſcover ſome agreement, in their matter, with bodies of the animal kingdom; yielding a volatile alkaline ſalt in conſiderable quantity, with little or nothing of the acid or fixt alkali, which the generality of vegetables afford. In animal ſubſtances alſo there are ſome exceptions to the general analyſis: from animal fats, inſtead of a volatile alkali, an acid liquor is obtained, and their empyreumatic oil wants the peculiar offenſiveneſs of the other animal oils.

SECT. III.

Minerals.

Oils and Bitumens.

IN the mineral kingdom is found a fluid oil, called naphtha or petroleum, floating on the ſurface of waters, or iſſuing from clefts of rocks, particularly in the eaſtern countries, of a ſtrong ſmell, very different from that of vegetable or animal oils, limpid almoſt as water, highly inflammable, not ſoluble in ſpirit of wine, and more averſe to union with water than any other oils.

There are different ſorts of theſe mineral oils, more or leſs tinged, and of a more or leſs agreeable, and a ſtronger or weaker, ſmell. By the admixture of concentrated acids, which raiſe no great heat or conflict with them, they become thick, and at length conſiſtent; and, in theſe ſtages, are called *bitumens*.

Theſe thickened or concreted oils, like the correſponding products of the vegetable kingdom, are generally ſoluble in ſpirit of wine, but much more difficultly, more ſparingly, and for the moſt part only partially: they liquefy by heat, but require the heat to be conſiderably ſtronger. In a proper degree of heat, they give out a fluid oil, greatly reſembling the native petrolea; a ſmall quantity of a black coaly matter remaining behind. Their ſmells are various; but all of them, either in their natural ſtate, or when melted, or ſet on fire, yield a peculiar kind of ſtrong ſcent, called, from them, *bituminous*.

Earths.

IN treating of vegetables and animals, we forbore to ſpeak of their earthy matters, that the diſtinguiſhing characters of the ſeveral claſſes of earthy bodies might be the more eaſily apprehended, by having them placed here in one ſynoptical view: the little impropriety of joining the vegetable and animal earths to the mineral, muſt be overlooked for the ſake of that advantage. Under the mineral earths are included ſtones, theſe being no other than earths in an indurated ſtate.—The different kinds of theſe bodies hitherto taken notice of, are the following:

I. *Earths ſoluble in the nitrous, marine, and vegetable acids, but not at all or exceedingly ſparingly in the vitriolic acid. When previouſly diſſolved in other acids, they are precipitated by the addition of this laſt, which thus unites with them into inſipid, or nearly inſipid concretes, not diſſoluble in any liquor.* Of this kind are,

1. The mineral calcareous earth: *diſtinguiſhed by its being convertible, in a ſtrong fire without addition, into an acrimonious calx, called quicklime.* This earth occurs in a variety of forms in the mi-

neral kingdom. The fine ſoft chalk, the coarſer limeſtones, the hard marbles, the tranſparent ſpars, the earthy matter contained in waters, and which, ſeparating from them, incruſtates the ſides of caverns, or hangs in icicles from the top, receiving from its different appearances different appellations; how ſtrongly ſoever ſome of theſe bodies have been recommended for particular medicinal purpoſes, are at bottom no other than different forms of this calcareous earth, ſimple pulverization depriving them of the ſuperficial characters by which they were diſtinguiſhed in the maſs. Moſt of them contain generally a greater or leſs admixture of ſome of the indiſſoluble kinds of earth; which, however, affects their medicinal qualities no otherwiſe, than by the addition which it makes to their bulk. Chalk appears to be one of the pureſt, and is therefore in general preferred. They all burn into a ſtrong quicklime: in this ſtate, a part of them diſſolves in water, which thus becomes impregnated with the aſtringent and lithontriptic powers that have been erroneouſly aſcribed to ſome of the earths in their natural ſtate.

2. The animal calcareous earth: *burning into quicklime, like the mineral.* Of this kind are oyſter ſhells, and all the marine ſhells that have been examined; though with ſome variation in the ſtrength of the quicklime produced from them.

3. The earth of bones and horns: *not at all burning into quicklime.* This kind of earth is more difficult of ſolution in acids than either of the preceding. It is accompanied in the ſubjects with a quantity of gelatinous matter, which may be ſeparated by long boiling in water, and more perfectly by burning in the open air: the earth may be extracted alſo from the bone or horn, though difficultly, by means of acids; whereas vegetables, and the ſoft parts of animals, yield their pure earth by burning only.

II. *Earths ſoluble with eaſe in the vitriolic as well as other acids; and yielding, in all their combinations therewith, ſaline concretes ſoluble in water.*

1. Magneſia alba: *compoſing with the vitriolic acid a bitter purgative liquor.* This earth has not yet been found naturally in a pure ſtate. It is obtained from the purging mineral waters and their ſalts, from the bitter liquor which remains after the cryſtallization of ſea ſalt from ſea water, and from the fluid which remains uncryſtallized in the putrefaction of ſome ſorts of rough nitre. The aſhes of vegetables appear to be nearly the ſame kind of earth.

2. Aluminous earth: *compoſing with the vitriolic acid a very aſtringent liquor.* This earth alſo has not been found naturally pure. It is obtained from alum, which is no other than a combination of it with the vitriolic acid: it may likewiſe be extracted, by ſtrong boiling in that acid, from clays and boles.

III. *Earths which by digeſtion in acids, either in the cold or in a moderate warmth, are not at all diſſolved.*

1. Argillaceous earth: *becoming hard, or acquiring an additional hardneſs in the fire.* Of this kind of earth there are ſeveral varieties, differing in ſome particular properties: as the purer *clays*, which, when moiſtened with water, form a very viſcous maſs, difficultly diffuſible through a larger quantity of the fluid, and ſlowly ſubſiding from it: *boles*, leſs viſcous, more readily miſcible with water, and more readily ſubſiding: and *ochres*, which have little or nothing of the viſcoſity of the two foregoing, and are commonly impregnated with a yellow or red ferrugineous calx.

2. Cryſtalline earth: *naturally hard, ſo as to ſtrike ſparks with ſteel: becoming friable in a ſtrong fire.* Of this kind are flints, cryſtals, &c. which appear to conſiſt of one and the ſame earth, differing in the purity, hardneſs and tranſparency of the maſs.

3. Gypſeous earth: *reducible by a gentle heat into a ſoft powder, which unites with water into a maſs, ſomewhat viſcous and tenacious while moiſt, but quickly drying and becoming hard. A greater heat deprives the powder of this property, without occaſioning any other alteration.* Such are the tranſparent *ſelenitæ*; the fibrous ſtony maſſes improperly called *Engliſh talc*; and the granulated *gypſa* or *plaſter of Paris* ſtones. Though theſe bodies, however, have been commonly looked upon as mere earths, of a diſtinct kind from the reſt, they appear, both from analytical and ſynthetical experiments, to be no other than combinations of the mineral calcareous earth with vitriolic acid. (See the characters of the earths of the firſt claſs.)

4. Talky earth: *ſcarcely alterable by a vehement fire.* The maſſes of this earth are generally of a fibrous or leafy texture; more or leſs pellucid, bright or glittering; ſmooth and unctuous to the touch; too flexible and elaſtic to be eaſily pulverized; ſoft, ſo as to be cut with a knife. In theſe reſpects ſome of the gypſeous earths greatly reſemble them, but the difference is readily diſcovered by fire; a weak heat reducing the gypſeous to powder, while the ſtrongeſt makes no other alteration in the talky, than ſomewhat diminiſhing their flexibility, brightneſs, and unctuoſity.

Metals.

Of metals, the next diviſion of mineral bodies, the moſt obvious characters are, their peculiar bright aſpect, perfect opacity, and great weight; the lighteſt of them is ſix, and the heavieſt upwards of nineteen times heavier than an equal bulk of water.

They all melt in the fire; except platina, a metallic body, which has not been applied to any medical uſe, and which is therefore excluded from this general view of medicinal ſubjects.

Gold and ſilver, how long ſoever they are continued in fuſion, remain unchanged and undiminiſhed. The other metals, if air be admitted to them, are gradually converted, with different degrees of facility, into a powdery or friable ſubſtance, called *calx*, deſtitute of the metallic aſpect, and much lighter in proportion to its bulk, than the metal itſelf. This change in their obvious properties is generally accompanied with a notable alteration in their medicinal virtues: thus quickſilver, which taken into the body in its crude ſtate and undivided, ſeems inactive, when calcined by fire, proves, even in ſmall doſes, a ſtrong emetic and cathartic, and, in ſmaller ones, a powerful alterative in chronical diſorders; while regulus of antimony, on the contrary, is changed, by the ſame treatment, from a high degree of virulence to a ſtate of inactivity.

Calces of mercury and arſenic exhale in a heat below ignition: thoſe of lead and biſmuth, in a red or low white heat, run into a tranſparent glaſs: the others are not at all vitreſcible, or not without extreme vehemence of fire. Both the calces and glaſſes recover their metallic form and qualities again, by the ſkilful addition of any kind of inflammable ſubſtance that does not contain a mineral acid.

All metallic bodies diſſolve in acids; ſome only in particular acids, as ſilver and lead in the nitrous; ſome only in compoſitions of acids, as gold in a mixture of the nitrous and marine; and others, as iron, and zinc, in all acids. Some likewiſe diſſolve in alkaline liquors, as copper; and others, as lead, in expreſſed oils. Fuſed with a compoſition of ſulphur and fixt alkaline ſalt, they are all, except zinc, made ſoluble in water.

All metallic ſubſtances, diſſolved in ſaline liquors, have powerful effects in the human body, though many of them appear in their pure ſtate to be inactive. Their activity is generally in proportion to the quantity of acid combined with them: Thus lead, which in its crude form has no ſenſible effect, when united with a ſmall portion of vegetable acid into ceruſe, diſcovers a low degree of the ſtyptic and malignant quality, which it ſo ſtrongly exerts when blended, with a larger quantity of the ſame acid, into what is called *ſaccharum ſaturni:* and thus mercury, with a certain quantity of the marine acid, forms the violent corroſive ſublimate, which by diminiſhing the proportion of acid becomes the mild medicine called *mercurius dulcis*.

Acids.

The mineral acids are diſtinguiſhed by the names of the concretes from which they have been principally extracted; the *vitriolic* from vitriol, the *nitrous* from nitre or ſaltpetre, and the *marine* from common ſea ſalt. They are all highly corroſive, inſomuch as not to be ſafely touched, unleſs largely diluted with water, or united with ſuch ſubſtances as obtund or ſupprefs their acidity. Mixed haſtily with vinous ſpirits, they raiſe a violent ebullition and heat, accompanied with a copious diſcharge of noxious fumes: a part of the acid unites intimately with the vinous ſpirit into a new compound, void of acidity, called dulcified ſpirit. It is obſervable, that the marine acid is much leſs diſpoſed to this union with ſpirit of wine, than either of the other two: nevertheleſs, many of the compound ſalts reſulting from the combination of earthy and metallic bodies with this acid, are ſoluble in that ſpirit, while thoſe with the other acids are not. All theſe acids effervefce ſtrongly with alkaline ſalts, both fixt and volatile, and form with them neutral ſalts, that is, ſuch as diſcover no marks either of an acid or alkaline quality.

The nitrous and marine acids are obtained in the form of a thin liquor, the acid part being blended with a large proportion of water, without which it would be diffuſed into an incoercible vapour: the vitriolic ſtands in need of ſo much leſs water for its condenſation as to aſſume commonly an oily conſiſtence (whence it is called *oil* of vitriol), and, in ſome circumſtances, even a ſolid one. Alkaline ſalts, and the ſoluble earths and metals, abſorb from the acid liquors only the pure acid part; ſo that the water may now be evaporated by heat, and the compound ſalt left in a dry form.

We have already taken notice of two ſorts of alkaline ſalt, the volatile alkali of animals, and the fixt alkali of vegetables. In the mineral kingdom, another ſpecies of fixt alkali, different in ſeveral reſpects from the vegetable, is found ſometimes in a detached ſtate, but more plentifully in combination with the marine acid, with which it compoſes ſea ſalt. From the coalition of the different acids with theſe three alkalies, and with the ſeveral ſoluble earths and metallic bodies, reſult a variety of ſaline compounds, the principal of which will be particularized in the ſequel of this work.

The vitriolic acid, in its concentrated liquid ſtate, is much more ponderous than the other two, emits no viſible vapours in the heat of the atmoſphere, but imbibes moiſture therefrom, and increaſes in its weight: the nitrous and marine emit copious corroſive fume, the nitrous yellowiſh red, and the marine white vapours. If bottles, containing the three acids, be ſtopt with cork, the cork is found in a little time tinged black by the vitriolic, corroded into a yellow ſubſtance by the nitrous, and into a whitiſh one by the marine.

Of the affinities of bodies.

It is already laid down as a character of one of the claſſes of earths, that the vitriolic acid precipitates them when they are previouſly diſſolved in any other acid. It is obvious, that, on the ſame principle, this particular acid may be diſtinguiſhed from all others. This character ſerves not only for the acid in its pure ſtate, but likewiſe for all its combinations that are ſoluble in water. If a ſolution of any compound ſalt, whoſe acid is the vitriolic, be added to a ſolution of chalk in any other acid, the vitriolic acid will part from the ſubſtance with which it was before combined, and join itſelf to the chalk, forming therewith a compound, which, being no longer diſſoluble in the liquor, renders the whole milky, for a time, and, then, gradually ſubſides.

This acid may be diſtinguiſhed alſo, in compound ſalts, by another criterion not leſs ſtrongly marked. If any ſalt containing it be mixed with powdered charcoal, and the mixture expoſed, in a cloſe veſſel, to a moderate ſtrong fire, the acid will unite directly with the inflammable part of the charcoal, and compoſe therewith a genuine ſulphur. Common brimſtone is no other than a combination of the vitriolic acid with a ſmall proportion of inflammable matter. With any kind of inflammable matter that is not volatile in cloſe veſſels, as the coal of vegetables, of animals, or of bitumens, this acid compoſes always the ſame identical ſulphur.

The nitrous acid alſo, with whatever kind of body it be combined, is both diſtinguiſhed, and extricated therefrom, by means of any inflammable ſubſtance brought to a ſtate of ignition: if the ſubject be mixed with a little powdered charcoal, and made red-hot, a deflagration or fulmination enſues, that is, a bright flame with a hiſſing noiſe, and the inflammable matter and the acid being thus conſumed or diſſipated together, there remains only the ſubſtance that was before combined with the acid, and the ſmall quantity of the aſhes afforded by the coal.

This property of the nitrous acid, of deflagrating with inflammable ſubſtances, and that of the vitriolic, of forming ſulphur with them, ſerve not only as criteria of the reſpective acids in the various forms and diſguiſes, but likewiſe for diſcovering inflammable matter in bodies, when its quantity is too ſmall to be ſenſible on other trials.

If a fixt alkaline ſalt be united with a vegetable acid, as that of vinegar, into a neutral ſalt; on adding to this compound ſome marine acid, the acetous acid will be diſengaged, ſo as to exhale totally in a moderate heat, leaving the marine in poſſeſſion of the alkali: the addition of the nitrous will, in like manner, diſpoſſeſs the marine, which now ariſes in its proper white fumes, though, without ſuch an addition, it could not be extricated from the alkali by any degree of heat: on the addition of the vitriolic acid, the nitrous gives way in its turn, exhaling in red fumes, and leaving only the vitriolic acid and the alkali united together.

Again, if any metallic body be diſſolved in an acid, the addition of any earthy body that is diſſoluble in that acid will precipitate the metal: a volatile alkaline ſalt will, in like manner, precipitate the earth: and a fixt alkali will diſlodge the volatile; which laſt being readily exhalable by heat, the remaining ſalt will be the ſame as if the acid and fixt alkali had been joined together at firſt, without the intervention of any of the other bodies.

THE power in bodies, on which theſe various tranſpoſitions and combinations depend, is called by the chemiſts AFFINITY; a term, like the Newtonian *attraction*, deſigned to expreſs, not the cauſe, but the effect. When an acid ſpontaneouſly quits a metal to unite with an alkali, they ſay *it has greater affinity* to the alkali than to the metal: and when, converſively, they ſay it has a greater affinity to fixt alkalies than to thoſe of the volatile kind, they mean only that it will unite with the fixt in preference to the volatile, and that, if previouſly united with a volatile alkali, it will forſake this for a fixt one.

The doctrine of the affinities of bodies is of very extenſive uſe in the chemical pharmacy: many of the officinal proceſſes, as we ſhall ſee hereafter, are founded on it: ſeveral of the preparations turn out very different from what would be expected by a perſon unacquainted with theſe properties of bodies; and ſeveral of them, if, from an error in the proceſs, or other cauſes, they prove unfit for the uſe intended, may be rendered applicable to other purpoſes, by ſuch tranſpoſitions of their component parts as are pointed out by the knowledge of their affinities.

I ſhall here, therefore, ſubjoin a table of the principal affinities obſerved in pharmaceutical operations, formed chiefly on that of Mr. Geoffroy (which was publiſhed in the Memoirs of the French academy for the year 1718), with ſuch corrections and additions as later experiments have furniſhed.

The table is thus to be underſtood. The ſubſtance printed in capitals, on the top of each ſeries, has the greateſt affinity with that immediately under it, a leſs affinity with the next, and ſo on to the end of the ſeries; that is, if any of the remote bodies have been combined with the top one, the addition of any of the intermediate bodies will diſunite them; the intermediate body uniting with the uppermoſt body of the ſeries, and throwing out the remote one. Thus, in the firſt ſeries of the affinities of water, a fixt alkali being placed between the water and inflammable ſpirit, it is to be concluded, that, wherever water and ſpirit be mixed together, the addition of any fixt alkaline ſalt will abſorb the water, and occaſion the pure ſpirit to be ſeparated. Where ſeveral ſubſtances are expreſſed in one ſeries, it is to be underſtood, that any one of thoſe bodies, which are neareſt to the uppermoſt, will in like manner diſengage from it any one of thoſe which are more remote.

Table of Affinities.

1. WATER :

Fixt alkaline ſalt :
Inflammable ſpirit.

2. WATER :

Inflammable ſpirit :
Volatile alkaline ſalt.

3. WATER.

Inflammable ſpirit :
Sundry compound ſalts.

4. INFLAMMABLE SPIRIT :

Water :
Oils and Reſins.

5. VITRIOLIC ACID :

Inflammable principle :
Fixt alkaline ſalts :
Calcareous earths calcined :
Volatile alkaline ſalts :
Calcareous earths uncalcined :
Zinc and Iron :
Copper :
Silver.

6. NITROUS ACID :

Inflammable principle :
Fixt alkaline ſalts :
Calcareous earths calcined :
Volatile alkaline ſalts :
Calcareous earths uncalcined :
Zinc :
Iron :
Copper :
Lead :
Mercury :
Silver :
Camphor.

7. MARINE ACID :

Fixt alkaline ſalts :
Calcareous earths calcined :
Volatile alkaline ſalts :
Calcareous earths uncalcined :
Zinc :
Iron :
Tin :
Regulus of antimony :
Copper :
Lead :
Silver :
Mercury.

8. ACETOUS ACID :

Iron :
Copper.

9. ALKALINE SALTS :

Vitriolic acid :
Nitrous acid :
Marine acid :
Vinegar :
Tartar :
Oils and Sulphur.

10. SOLUBLE EARTHS :

Vitriolic acid :
Nitrous acid :
Marine acid.

11. INFLAMMABLE PRINCIPLE :

Nitrous acid :
Vitriolic acid :
Metallic ſubſtances :
Fixt alkaline ſalts :

12. SULPHUR :

Fixt alkali, and Quicklime :
Iron :
Copper :
Lead :

Silver:
Regulus of antimony:
Mercury:
Arſenic:

13. GOLD:
Ethereal ſpirit:
Acids.

14. MERCURY:
Marine acid:
Vitriolic acid:
Nitrous acid.

15. LEAD:
Vitriolic acid:
Marine acid:
Nitrous acid:
Vinegar:
Oils.

16. SILVER:
Marine acid:
Vitriolic acid:
Nitrous acid.

17. COPPER:
Vitriolic acid:
Marine acid:
Nitrous acid.

18. IRON.
Vitriolic acid:
Marine acid:
Nitrous acid.

19. REGULUS of ANTIMONY:
Vitriolic acid:
Nitrous acid:
Marine acid.

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CHAPTER III.

Of the Pharmaceutical Apparatus.

ONE of the principal parts of the pharmaceutic apparatus conſiſts in contrivances for containing and applying fire, and for directing and regulating its power. Of theſe contrivances, called *furnaces*, there are different kinds, according to the convenience of the place, and the particular purpoſes they are intended to anſwer. I ſhall here endeavour to give a general idea of the ſtructure of thoſe which are employed in pharmaceutical operations, and of the principles on which they are built.

Furnaces.

THE moſt ſimple furnace is the common ſtove, otherwiſe called the furnace for OPEN FIRE. This is uſually made of an iron hoop, five or ſix inches deep: with a grate or ſome iron bars acroſs the bottom, for ſupporting the fuel. It either ſtands upon feet, ſo as to be moveable from place to place; or is fixt in brickwork. In this latter caſe, a cavity is left under the grate, for receiving the aſhes that drop through it; and an aperture or door, in the forepart of this aſh-pit, ſerves both for allowing the aſhes to be occaſionally raked out, and for admitting air to paſs up through the fuel. This furnace is deſigned for ſuch operations as require only a moderate heat; as infuſion, decoction, and the evaporation of liquids. The veſſel, containing the ſubject, is ſupported over the fire by a trevet.

A deeper hoop or body, cylindrical, parallelopipedal, widening upwards, elliptical, or of other figures; formed of, or lined with, ſuch materials as are capable of ſuſtaining a ſtrong fire; with a grate and aſh-pit beneath, as in the preceding; and communicating at the top with a perpendicular pipe, or chimney; makes a WIND FURNACE.

The greater the perpendicular height of the chimney, the greater will be the draught of air through the furnace, and the more intenſely will the fire burn; provided the width of the chimney is ſufficient to allow a free paſſage to all the air that the furnace can receive through the grate: for which purpoſe, the area of the aperture of the chimney ſhould be nearly equal to the area of the interſtices of the grate.

Hence, where the chimney conſiſts of moveable pipes, made to fit upon one another at the ends, ſo that the length can be occaſionally increaſed or diminiſhed, the vehemence of the fire will be increaſed or diminiſhed in the ſame proportion.

In furnaces whoſe chimney is fixed, the ſame advantage may be procured on another principle. As the intenſity of the fire depends wholly upon the quantity of air ſucceſſively paſſing through and animating the burning fuel, it is obvious, that the moſt vehement fire may be ſuppreſſed or reſtrained at pleaſure, by more or leſs cloſing either the aſh-pit door by which the air is admitted, or the chimney by which it paſſes off; and that the fire may be more or leſs raiſed again, by more or leſs opening thoſe paſſages. A moveable plate, or REGISTER, in any convenient part of the chimney, affords commodious means of varying the width of the paſſage, and conſequently of regulating the heat.

THERE are two general kinds of theſe wind furnaces; one, with the chimney on the top, over the middle of the furnace; the other with the chimney on one ſide, and the mouth clear.

In the former, either the upper part of the furnace is contracted to ſuch an aperture, that the chimney may fit upon it; or it is covered with an arched dome, or with a flat plate, having a like aperture in the middle. As in this diſpoſition of the chimney, the inſide of the furnace cannot be come at from above; a door is made in the ſide, a little above the grate, for ſupplying fuel, inſpecting the matter in the fire, &c.

For performing FUSIONS in this furnace, the crucible, or melting veſſel, is placed immediately among the fuel; with a ſlip of brick, or ſome other like ſupport, between it and the grate, to keep the cold air, which enters underneath, from ſtriking on its bottom.

When deſigned as a REVERBERATORY, that is, for diſtillation in long necks or coated glaſs retorts, two iron bars are placed acroſs, above the fire, for ſupporting the veſſel, whoſe neck comes out at an aperture made for that purpoſe in the ſide. This aperture ſhould be made in the ſide oppoſite to that in which is the door above-mentioned, or at leaſt ſo remote from it, that the receiver, fitted on the neck of the diſtilling veſſel without the furnace, may not lie in the operator's way when he wants to ſtir the fire, or throw in freſh fuel.

The other kind of wind furnace communicates, by an aperture in its back part near the top, either with an upright pipe of its own, or with the chimney of the room; in which latter caſe, all other paſſages into the chimney muſt be cloſed up. Here the mouth of the furnace ſerves for a door, which may be occaſionally covered with a plate or tile. Of this kind is the furnace moſt commonly uſed for fuſion in a crucible.

THIS laſt conſtruction, by leaving the mouth of the furnace clear, affords the convenience of letting into it a boiling or evaporating pan, a copper ſtill, an iron pot for diſtilling hartſhorn, an iron ſand pot, or other like veſſels, of ſuch a ſize, that they may be ſupported on the furnace by their rims. The mouth being thus occupied by the veſſels, a door muſt be made in the ſide for ſupplying and ſtirring the fuel.

When a furnace of this kind is deſigned only for a SAND BATH, it is moſt commodious to have the ſand placed on a long iron plate furniſhed with a ledge of freeſtone or brickwork at each ſide. The mouth of the furnace is to be cloſely covered by one end of this plate; and the canal, by which the furnace communicates with its chimney, is to be lengthened and carried along under the plate; the plate forming the upper ſide of the canal. In this kind of ſand-bath, digeſtions, &c. requiring different degrees of heat, may be carried on at once; for the heat decreaſes gradually from the end over the furnace to the other.

When large veſſels, as STILLS, and iron pots for diſtilling hartſhorn and aqua-fortis, are fixed in furnaces, a conſiderable part of the bottom of the veſſel is commonly made to reſt upon ſolid brickwork.

The large ſtill, whoſe bottom is narrow in proportion to its height, and whoſe weight when charged with liquor requires great part of it to be thus ſupported, expoſes but a ſmall ſurface to the action of the fire underneath. To make up for this diſadvantage, the heat, which riſes at the further end of a long narrow grate, is conveyed all round the ſides of the veſſel, by a ſpiral canal, which communicates at top with a common chimney.

The pots for diſtilling hartſhorn and aqua-fortis in the large way have part of their great weight borne up by three ſtrong pins or trunnions, at equal diſtances round the pot towards the middle, reaching into a brickwork; ſo that leſs ſupport being neceſſary underneath, a greater ſurface of the wide bottom lies expoſed to the immediate action of the fire.

IF a furnace, communicating with its chimney by a lateral canal, as in the ſand furnace above-mentioned, be carried to a conſiderable height above the part where this canal enters it; and it be filled with fuel to the top, and cloſely covered; the fuel will burn no higher than up to the upper ſide of the canal through which the air paſſes off, and, in proportion as this lower part of the fuel conſumes, it will be ſupplied by that above, which falls down in its place. Hence in this furnace, called an ATHANOR, a conſtant heat may be kept up for a conſiderable length of time, without attendance.

The tower of the athanor, or that part which receives the fuel, is commonly made to widen a little downwards, that the coals may fall the more freely; but not ſo much as that the part on fire at bottom may be too ſtrongly preſſed. A ſmall aperture is made oppoſite to the canal or flew, or a number of openings according to the ſize of the furnace and the degree of heat required, for ſupplying air, which is more conveniently admitted in this manner than through the grate, as the interſtices of the grate are in time choaked up by the aſhes.

This furnace is deſigned only for heating bodies exterior to it. Its canal or *flew*, as in the ſand furnace already deſcribed, paſſes under a ſand-bath or water-bath; at the further end of which, it riſes perpendicularly to ſuch a height, as may occaſion a ſufficient draught of air through the fire.

The flew may be ſo wide, as to correſpond to the whole height of the fire-place. A regiſter or ſliding plate, placed between the flew and the furnace, enables us to increaſe or diminiſh this height, and conſequently the quantity of fire, at pleaſure. If the ſpace beneath the flew be incloſed to the ground, the heat in this cavity will be conſiderable enough to be applicable to ſome uſeful purpoſes.

With regard to the materials of furnaces, the fixt ones are built of bricks, cemented together by ſome good loam or clay. Any kind of loam or clayey compoſition that is of a proper degree of tenacity, which, when made into a paſte with water and well worked, does not ſtick to the fingers, and which, when thoroughly dried, neither cracks nor melts in a vehement fire, is fit for this uſe: the purer and more tenacious clays require to have their tenacity leſſened by an admixture of ſand, or rather of the ſame kind of clay burnt and groſsly powdered.

Smaller portable furnaces are made of ſtrong iron or copper plates, lined to the thickneſs of an inch or more with the ſame kind of clayey compoſition: which, for this uſe, may be beaten with ſome horſe-dung, chopt ſtraw, or cut hair or tow.

Very commodious portable furnaces, for a buſineſs of moderate extent, may be formed alſo of the larger kind of the common black-lead melting pots; by cutting a door at the bottom of the pot for the aſh-pit, another above this for the fire-place; and introducing a circular iron grate, of ſuch a ſize, that it may reſt between the two doors. [A particular account of the method of preparing theſe furnaces for different uſes may be ſeen in the firſt part of the Commercium Philoſophico-technicum.]

Baths.

Where a ſtrong degree of heat is requiſite, as in the fuſion of metals, &c. the veſſel containing the ſubject-matter is placed among the burning fuel, or immediately over it: this is called operating in a naked fire. Where a ſmaller heat is ſufficient, and the veſſel employed is either of glaſs, or of the more tender kinds of earthen ware, the ſand-bath or water-bath is uſed, to defend the veſſel from the immediate action of the fire, and to render the heat leſs fluctuating.

Both theſe baths have their particular advantages and inconveniences. In water, the heat is equal through every part of the fluid; whereas in ſand, it varies in different parts of one perpendicular line, decreaſing from the bottom to the top. Water cannot be made to receive or to tranſmit to veſſels immerſed in it, above a certain degree of heat, viz. that which is ſufficient to make it boil, and hence it ſecures effectually againſt any danger of an exceſs of heat in thoſe operations wherein the product would be injured by a heat greater than that of boiling water: but this advantage renders it uſeleſs for proceſſes which require a greater heat, and for which ſand or other like ſolid intermedia are neceſſarily employed. There is this convenience alſo in the ſand-bath, that the heat may be readily diminiſhed or increaſed about any particular veſſel, by raiſing it higher out of the ſand, or ſinking it deeper; that different ſubjects may be expoſed to different degrees of heat from one fire; and that it keeps the veſſels ſteady. The ſand made choice of ſhould be a large coarſe-grained kind, ſeparated from the finer parts by waſhing, and from little ſtones by the ſieve.

Coating of glaſſes, and Lutes.

Some proceſſes require to be performed with glaſs veſſels in a naked fire. For theſe purpoſes, veſſels made of the thinneſt glaſs ſhould be choſen; for theſe bear the fire, without cracking, much better than thoſe which are thicker and in appearance ſtronger.

All glaſſes, or other veſſels that are apt to crack in the fire, muſt be cautiouſly nealed, that is, heated by ſlow degrees: and when the proceſs is finiſhed, they ſhould be as ſlowly cooled, unleſs where the veſſel is to be broken to get out the preparation, as in ſome ſublimations: in this caſe it is more adviſeable to expoſe the hot glaſs ſuddenly to the cold air, which will ſoon occaſion it to crack, than to endanger throwing down the ſublimed matter among the feces by a blow.

As a defence from the violence of the fire, and to prevent the contact of cold air on ſupplying freſh fuel, &c. the glaſs is to be coated over, to the thickneſs of about half a crown, with Windſor loam, ſoftened with water into a proper conſiſtence, and beaten up with ſome horſe-dung, or with the other clayey compoſitions already mentioned.

Theſe compoſitions ſerve alſo as a lute, for ſecuring the junctures of the veſſels in the diſtillation of the volatile ſalts and ſpirits of animals: for the diſtillation of acid ſpirits, the matter may be moiſtened with a ſolution of fixt alkaline ſalt inſtead of water. For moſt other purpoſes, a piece of wet bladder, or a paſte of flour and water, or of linſeed meal (that is, the cake left after the expreſſion of oil of linſeed) are ſufficient lutes. The few ſimple lutes, here deſcribed, will be found to anſwer all the purpoſes of the more operoſe compoſitions recommended for theſe intentions by the chemical writers.

Veſſels.

IT would be needleſs to enter here into a particular detail of the pharmaceutical inſtruments; as we ſhall have occaſion to mention the principal of them in the following chapter, in ſpeaking of the ſeveral operations to which they are reſpectively ſubſervient. In this place, I ſhall only give the operator a few general cautions with regard to the *matter* of the veſſels deſigned for containing the ſubject.

Metalline veſſels, except thoſe made of gold or ſilver, are corroded by acids, even by the milder ones of the vegetable kingdom. Copper ones are corroded alſo by alkaline liquors, and by ſome neutral ones, as ſolutions of ſal ammoniac: it is obſervable, that vegetable acids do not act upon this metal by boiling, ſo much as by ſtanding in the cold; for even lemon-juice may be boiled in a clean copper veſſel, without receiving from it any taſte or ill quality; whereas, in the cold, it ſoon diſſolves ſo much as to contract a pernicious taint. The tin, with which copper veſſels are uſually lined, gives likewiſe a ſenſible impregnation to acid juices; and this impregnation alſo is probably not innocent, more eſpecially as a quantity of lead is commonly mixed with the tin.

The common EARTHEN veſſels are of a looſe porous texture, and hence are apt to imbibe a conſiderable quantity of certain liquids, particularly of thoſe of the ſaline kind; which ſoon diſcover their penetrating the veſſel, by ſhooting into ſaline effloreſcences on the outſide. Thoſe which are GLAZED have their glazing corroded by acids; by vinegar, and the acid juices of fruits, as well as by the ſtronger acids of the mineral kingdom. And as this glazing conſiſts chiefly of vitrified lead, the impregnation, which it communicates to theſe liquors, is of a very dangerous kind: if vinegar be boiled for ſome time in a glazed earthen veſſel, it will yield, on being inſpiſſated, a true ſaccharum ſaturni, that is, a ſalt compoſed of lead and the acetous acid, of which hereafter.

The veſſels called, from their hardneſs and compactneſs, STONE WARE, are in good meaſure free from the inconveniences of the coarſer earthen ones. Their glazing, being a part of the clay itſelf ſuperficially vitrified by means of the fumes of common ſalt, appears to be proof againſt acids.

GLASS veſſels ſuffer no corroſion, and give no taint, in any of the pharmaceutic operations. Theſe therefore, in ſuch proceſſes as will admit their uſe, ought always to be preferred.

Weights.

Two different kinds of weights are made uſe of in this country; one in the merchandize of gold and ſilver; the other for almoſt all goods beſides. The firſt we call Troy, the latter Averdupois weight.

The goldſmiths divide the Troy pound into twelve ounces; the ounce into twenty pennyweights; and the pennyweight into twenty-four grains. The Averdupois pound is divided into ſixteen ounces; and the ounce into eight parts, called drams.

The pound of the London and Edinburgh diſpenſatories (which is the only one made uſe of in this work) is that of the goldſmiths, divided in the following manner;

The pound	contains	twelve Ounces.
The Ounce		eight Drams.
The Dram		three Scruples.
The Scruple		twenty Grains.

The grain is equal to the goldſmiths' grain.

The medical or Troy pound is leſs than the Averdupois, but the ounce and the dram greater. The Troy pound contains 5670 grains; the Averdupois 7000 grains. The Troy ounce contains 480 grains; the Averdupois only $437\frac{1}{2}$. The Troy dram 60; the Averdupois dram ſomewhat more than 27. Eleven drams Averdupois are equal to five drams Troy; twelve ounces Averdupois to nearly eleven ounces Troy; and nineteen pounds Averdupois to ſomewhat more than twenty-three pounds Troy.

Theſe differences in our weights have occaſioned great confuſion in the practice of pharmacy. As the druggiſts and grocers ſell by the Averdupois weight, the apothecaries have not in general kept any weights adjuſted to the Troy pound greater than two drams, uſing for all above Averdupois. By this means it is apparent, that in all compoſitions, where the ingredients are preſcribed ſome by pounds and others by ounces, they are taken in a wrong proportion to each other; and the ſame happens when they are directed in leſſer denominations than the ounce, as theſe ſubdiviſions, uſed by the apothecaries, are made to a different ounce. The mercurial plaſter of the late Pharmacopœia, and the mercurial cerate of the preſent, if compounded by the Averdupois weight, contain about one-ſixth leſs quickſilver than if made, as they ought to be, by the Troy. This error prevailed ſo far as to be received in ſome former editions of the London Pharmacopœia itſelf; but is now happily removed.

Meaſures.

The meaſures employed with us in pharmacy are the common wine meaſures.

A Gallon } contains { eight Pints *(libræ.)*
The Pint } contains { ſixteen Ounces.
The Ounce } contains { eight Drams.

By a ſpoonful is underſtood, in the London diſpenſatory, the meaſure of half an ounce; in the Edinburgh, half an ounce weight in ſyrups, and three drams in diſtilled waters.

Though the pint is called by Latin writers *libra* or pound, there is not any known liquor of which a pint meaſure anſwers to that weight. A pint of the higheſt rectified ſpirit of wine exceeds a pound by above half an ounce; a pint of water exceeds it by upwards of three ounces; and a pint of oil of vitriol weighs more than two pounds and a quarter.

A table of the weights of certain meaſures of different fluids may on many occaſions be uſeful, both for aſſiſting the operator in regulating their proportions in certain caſes, and for ſhewing the comparative gravities of the fluids themſelves. I have therefore drawn up ſuch a table for a pint, an ounce, and a dram meaſure, of thoſe liquids, whoſe gravity has been determined by experiments that can be relied on. The wine gallon contains 231 cubic inches, whence the pint contains $28\frac{7}{8}$; the ounce $1\frac{163}{128}$; and the dram $\frac{231}{1024}$ of a cubic inch.

Table of the weights of different fluids.

	Pint weighs			Ounce meaſure weighs	Dram meaſure weighs
	ounces	drams	grains	grains	grains
INFLAMMABLE SPIRITS.					
Æthereal Spirit of Wine - -	11	1	36	336	42
Highly-rectified Spirit of Wine - -	12	5	20	380	47½
Common-rectified Spirit of Wine - -	13	2	40	400	50
Proof Spirit - - -	14	1	36	426	53
Dulcified Spirit of Salt - -	14	4	48	438	55
Dulcified Spirit of Nitre - -	15	2	40	460	57½
WINES.					
Burgundy - - -	14	1	36	426	53
Red Port - - - -	15	1	36	456	57
Canary - - - -	15	6	40	475	59
EXPRESSED OILS.					
Oil Olive - - -	14	0	0	420	52½
Linſeed Oil - - -	14	2	8	428	53½
ESSENTIAL OILS.					
Oil of Turpentine - - -	12	1	4	364	45½
of Orange Peel - - -	-		-	408	51
of Juniper Berries - - -	-		-	419	52

	Pint weighs			Ounce meaſure weighs	Dram meaſure weighs
	ounces	drams	grains	grains	grains
Oil of Roſemary	-		-	430	54
of Origanum	-		-	432	54
of Caraway Seeds	-		-	432	54
of Nutmegs	-		-	436	54½
of Savin	-		-	443	55½
of Hyſſop	-		-	443	55½
of Cummin Seed	-		-	448	56
of Mint	-		-	448	56
of Pennyroyal	-		-	450	56¼
of Dill Seed	-		-	457	57
of Fennel Seed	-		-	458	57
of Cloves	-		-	476	59½
of Cinnamon	-		-	476	59½
of Saſſafras	-		-	503	63
ALKALINE LIQUORS.					
Lixivium ſaponarium, *Pharm. Lond.*	16	0	0	480	60
Spirit of Sal ammoniac	17	1	10	515	64½
Strong Soapboilers' ley	17	6	24	534	67
Lixivium tartari	24	0	0	720	90
ACID LIQUORS.					
Wine Vinegar	15	3	44	464	58
Beer Vinegar	15	6	56	476	59½
Glauber's Spirit of Salt	17	4	0	525	65½
Glauber's Spirit of Nitre	20	2	40	610	76
Strong oil of Vitriol	28	5	20	860	107½
ANIMAL FLUIDS.					
Urine	15	5	20	470	59
Cows' milk	15	6	40	475	59½
Aſſes' milk	16	0	0	480	60
Blood	16	1	4	484	60½
WATERS.					
Diſtilled water	15	1	50	456	57
Rain water	15	2	40	460	57½
Spring water	15	3	12	462	58
Sea Water	15	5	20	470	59
QUICKSILVER	214	5	20	6440	805

CHAPTER IV.

Of the Pharmaceutical Operations.

SECT. I.

Solution.

SOLUTION is an intimate commixture of ſolid bodies with fluids into one ſeemingly homogene liquor. The diſſolving fluid is called a MENSTRUUM or SOLVENT.

The principal menſtrua made uſe of in pharmacy, are, *water*, *vinous ſpirits*, *oils*, *acid*, and *alkaline* liquors.

WATER is the menſtruum of all ſalts, of vegetable gums, and of animal gellies. Of ſalts, it diſſolves only a determinate quantity, though of one kind of ſalt more than another; and being thus SATURATED, leaves any additional quantity of the ſame ſalt untouched.

Experiments have been made for determining the quantities of water which different ſalts require for the diſſolution. Mr. Eller has given a large ſet in the Memoirs of the royal academy of ſciences of Berlin for the year 1750, from which the following table is extracted.

Table of the ſolubility of fluids.

Eight ounces by weight of diſtilled water diſſolved

	oz.	dr.	gr.
Of Refined Sugar	24	0	0
Green Vitriol	9	4	0
Blue Vitriol	9	0	0
White Vitriol	4	4	0
Epſom Salt	4	0	0
Purified Nitre	4	0	0
Soluble Tartar	4	0	0
Common Salt	3	4	0
Sal gemmæ	3	4	0
Sal catharticus Glauberi	3	4	0
Seignette's Salt	3	0	0
Alum	2	4	0
Sal ammoniac	2	4	0
Vitriolated Tartar	1	4	0
Salt of Hartſhorn	1	4	0
Sugar of Lead	1	2	0
Cream of Tartar	1	0	0
Borax	0	4	20

Though great care appears to have been taken in making theſe experiments, it is not to be expected, that the proportions of the ſeveral ſalts, ſoluble in a certain quantity of water, will always be found exactly the ſame with thoſe juſt ſet down. Salts differ in their ſolubility, according to the degree of their purity, perfection, and dryneſs: the vitriols, and the artificial compound ſalts in general, differ remarkably in this reſpect, according as they are more or leſs impregnated with the acid ingredient. Thus vitriolated tartar, perfectly neutralized, is extremely difficult of ſolution. The matter which remains in making Glauber's ſpirit of nitre (See Part III. Chap. viii. Sect. 6.) is no other than a vitriolated tartar, and it diſſolves ſo difficultly, that the operator is obliged to break the retort in order to get it out; but on adding more of the vitriolic acid, it diſſolves with eaſe. Hence many have been tempted to uſe an over-proportion of acid in this preparation, and we frequently find in the ſhops, under the name of vitriolated tartar, this acid ſoluble ſalt. The degree of heat occaſions alſo a notable difference in the quantity of ſalt taken up: in very cold weather, eight ounces of water will diſſolve only about one ounce of nitre; whereas, in warm weather, the ſame quantity will take up three ounces or more. To theſe circumſtances are probably owing, in great part, the remarkable differences in the proportional ſolubilities of ſalts, as determined by different authors. It is obſervable, that common ſalt is leſs affected in its ſolubility, by a variation of heat, than any other ſalt; for water in a temperate ſtate will diſſolve nearly as much of it as very hot water; and accordingly this is the ſalt in which the different experiments agree the beſt. In the experiments of Hoffmann, Neumann, and Petit, the proportion of this ſalt, on a reduction of the numbers, comes out exactly the ſame, viz. three ounces of the ſalt to eight of water. Dr. Brownrigg makes the quantity of ſalt a little more; Dr. Grew, a dram and a ſcruple more; and Eller, as appears in the above table, four drams more. So, in the trials of ſix different perſons, made probably in different circumſtances, the greateſt difference is only one-ſixth of the whole quantity of ſalt; whereas in ſome other ſalts there are differences of twice or thrice the quantity of the ſalt. In the experiments, from which the table is drawn, the water was of the temperature of between 40 and 42 degrees of Fahrenheit's thermometer; or above freezing by about one-ſeventh of the interval between freezing and the human heat.

Some ſalts omitted by Eller are here ſubjoined. The firſt is taken from Dr. Grew, and the other four from Neumann.

Eight ounces of water diſſolved

		oz.	dr.	gr.
Of fixt alkaline Salt - -	above	8	0	0
Sal diureticus - - - -		8	0	0
Sugar-Candy, both brown and white - -		9	0	0
Sugar of Milk - - -		0	2	40
Eſſential Salt of Sorrel - - -		0	1	20

Though water takes up only a certain quantity of one kind of ſalt, yet, when ſaturated with one, it will ſtill diſſolve ſome portion of another; and, when it can bear no more of either of theſe, it will ſtill take up a third, without letting go any of the former. The principal experiments of this kind, that have been made, relative to pharmaceutic ſubjects, are exhibited in the following table, of which the two firſt articles are from Grew, and the others from Eller.

Water, 32 parts by weight,

fully ſaturated with	diſſolved afterwards			
Nitre - -	Sal ammoniac	10		
Common Salt - -	Nitre -	10	Sal ammoniac	2
Nitre - -	Fixt Alkali	7	Common Salt	2
Common Salt -	Nitre, near	2	Fixt Alkali	2½
Volatile alkali -	Nitre -	4	Sugar -	2
Sal ammoniac -	Common Salt	2½		
Soluble Tartar -	Nitre -	2		
Vitriolated Tartar -	Fixt Alkali	2		
Glauber's Salt -	Nitre -	1	Sugar -	1
Epſom Salt - -	Sugar -	6		
Borax - - -	Fixt Alkali	2		

In regard to the other claſs of bodies for which water is a menſtruum, viz. thoſe of the gummy and gelatinous kind, there is no determinate point of ſaturation: the water unites readily with any proportions of them, forming with different quantities, liquors of different conſiſtences. This fluid takes up likewiſe, when aſſiſted by trituration, the vegetable gummy reſins, as ammoniacum and myrrh; the ſolutions of which, though IMPERFECT, that is, not tranſparent, but turbid, and of a milky hue, are nevertheleſs applicable to valuable purpoſes in medicine. It mingles with vinous ſpirits, with acid and alkaline liquors, not with oils, but imbibes ſome of the more ſubtile parts of eſſential oils, ſo as to become impregnated with their ſmell and taſte.

Rectified SPIRIT OF WINE is the menſtruum of the eſſential oils, reſins and camphor of vegetables; of the pure diſtilled oils, and ſeveral of the colouring and medicinal parts of animals; of ſome mineral bituminous ſubſtances, as of ambergris; and of ſoaps, though it does not act upon the expreſſed oil and fixt alkaline ſalt, of which ſoap is compoſed; whence, if ſoap contain any ſuperfluous quantity of either the oil or ſalt, it may, by means of this menſtruum, be excellently purified therefrom. It diſſolves, by the aſſiſtance of heat, volatile alkaline ſalts; and, more readily, the neutral ones, compoſed either of fixed alkali and the acetous acid, as the ſal diureticus, or of volatile alkali and the nitrous acid, as alſo the ſalt of amber, &c. It mingles with water and with acids; not with alkaline lixivia.

Oils diſſolve vegetable reſins and balſams, wax, animal fats, mineral bitumens, ſulphur, and certain metallic ſubſtances, particularly lead. The expreſſed oils are, for moſt of theſe bodies, more powerful menſtrua than thoſe obtained by diſtillation; as the former are more capable of ſuſtaining, without injury, a ſtrong heat, which is, in moſt caſes, neceſſary to enable them to act. It is ſaid, that one ounce of ſulphur will diſſolve in three ounces of expreſſed oil, particularly that of linſeed, but requires ſix ounces of eſſential oil, as that of turpentine.

All acids diſſolve alkaline ſalts, alkaline earths, and metallic ſubſtances. The different acids differ greatly in their action upon theſe laſt; one diſſolving only ſome particular metals; and another, others.

The *vegetable* acids diſſolve a conſiderable quantity of zinc, iron, copper, lead, and tin; and extract ſo much from the metallic part of antimony, as to become powerfully emetic: they diſſolve lead more readily, if the metal be previouſly calcined by fire, than in its metallic ſtate.

The *marine* acid diſſolves zinc, iron and copper; and though it ſcarce acts on any other metallic ſubſtance in the common way of making ſolutions, it may nevertheleſs be artfully combined with them all except gold: the corroſive ſublimate, and antimonial cauſtic of the ſhops, are combinations of it with mercury and the metallic part of antimony, effected by applying the acid, in the form of fume, to the ſubjects, at the ſame time alſo ſtrongly heated.

The *nitrous* acid is the common menſtruum of all metallic ſubſtances, except gold and the metallic part of antimony; of which two, the proper ſolvent is a mixture of the nitrous and marine acids, called *aqua regia.*

The *vitriolic* acid, diluted with water, eaſily diſſolves zinc and iron: in its concentrated ſtate, and aſſiſted by a boiling heat, it may be made to corrode, or imperfectly diſſolve, moſt of the other metals.

ALKALINE *lixivia* diſſolve oils, reſinous ſubſtances, and ſulphur. Their power is greatly promoted by the addition of *quick-lime:* inſtances of which occur in the preparation of ſoap, and in the common cauſtic. Thus acuated, they reduce the fleſh, bones, and other ſolid parts of animals, into a gelatinous matter.

Solutions made in water, and in ſpirit of wine, poſſeſs the virtues of the body diſſolved; while oils generally ſheathe its activity; and acids and alkalies vary its quality. Hence watery and ſpirituous liquors are the proper menſtrua of the native virtues of vegetable and animal matters.

Moſt of the foregoing ſolutions are eaſily effected, by pouring the menſtruum on the body to be diſſolved, and ſuffering them to ſtand together, for ſome time, expoſed to a ſuitable warmth. A ſtrong heat is generally requiſite to enable oils and alkaline liquors to perform their office: nor will acids act on ſome metallic bodies without its aſſiſtance. The action of watery and ſpirituous menſtrua is likewiſe expedited by a moderate heat; though the quantity, which they afterwards keep diſſolved, is not, as ſome ſuppoſe, by this means increaſed: all that heat occaſions theſe to take up, more than they would do in a longer time in the cold, will, when the heat ceaſes, ſubſide again: this at leaſt is moſt commonly the caſe, though there may be ſome inſtances of the contrary.

The action of acids on the bodies which they diſſolve, is generally accompanied with heat, effervеſcence, and a copious diſcharge of fumes. The fumes which ariſe during the diſſolution of ſome metals in the vitriolic acid, prove inflammable: hence in the preparation of the artificial vitriols of iron and zinc, the operator ought to be careful, eſpecially where the ſolution is made in a narrow-mouthed veſſel, leſt, by the imprudent approach of a candle, the exhaling vapour be ſet on fire.

There is another ſpecies of ſolution, in which the moiſture of the air is the menſtruum. Fixt alkaline ſalts and thoſe of the neutral kind, compoſed of alkaline ſalts, and the vegetable acids, or of ſoluble earths and any acid except the vitriolic, and ſome metallic ſalts, on being expoſed for ſome time to a moiſt air, gradually attract its humidity, and at length become liquid. Some ſubſtances, not diſſoluble by the application of water in its groſſer form, as the butter of antimony, are eaſily liquefied by this ſlow action of the aereal moiſture. This proceſs is termed DELIQUIATION.

SECT. II.

Extraction.

THE liquors which diſſolve certain ſubſtances in their pure ſtate, ſerve likewiſe to *extract* them from admixtures of other matter. Thus rectified ſpirit of wine, the menſtruum of eſſential oils and reſins, takes up the virtues of the reſinous and oily vegetables; as water does thoſe of the mucilaginous and ſaline; the inactive earthy parts remaining untouched by both. Water extracts likewiſe from many plants, ſubſtances, upon which by themſelves it has little effect; even eſſential oils being, as we have formerly obſerved, rendered ſoluble in that fluid, by the admixture of gummy and ſaline matter, of which all vegetables participate in a greater or leſs degree. Thus many of the aromatic plants, and moſt of the bitters and aſtringents, yield their virtues to this menſtruum.

Extraction is performed by MACERATING or STEEPING the ſubject in its appropriated menſtruum, in the cold; or DIGESTING or CIRCULATING them, in a moderate warmth; or INFUSING the plant in the boiling liquor, and ſuffering them to ſtand in a covered veſſel till grown cold; or actually BOILING them together for ſome time.

The term *digeſtion* is ſometimes uſed for maceration, and, in this caſe, the proceſs is directed to be performed *without heat:* where this circumſtance is not expreſſed, digeſtion always implies the uſe of heat. Circulation differs from digeſtion only in this; that the ſteam, into which a part of the liquor is reſolved by the heat, is, by means of a proper diſpoſition of the veſſels, condenſed and conveyed back upon the ſubject. Digeſtion is uſually performed in a *matraſs* (or *bolthead)*, Florence flaſk, or the like; either of which may be converted into a *circulatory veſſel*, by inverting another into the mouth, and ſecuring the juncture with a piece of wet bladder. A ſingle matraſs, if its neck be very long and narrow, will anſwer the purpoſe as effectually; the vapour cooling and condenſing before it can riſe to the top. In a veſſel of this kind, even ſpirit of wine, one of the moſt volatile liquors we know, may be boiled without any conſiderable loſs. The uſe of this inſtrument is likewiſe free from any inconvenience, which may, in ſome caſes, attend the other, of the uppermoſt veſſel being burſt or thrown off. As the long-necked matraſſes here recommended are difficultly filled or emptied, and likewiſe very dear, a long glaſs pipe may be occaſionally luted to the ſhorter ones.

Heat greatly expedites extraction; but by theſe means proves as injurious to ſome ſubſtances, by occaſioning the menſtruum to take up their groſſer and more ungrateful parts; as it is neceſſary for enabling it to extract the virtues of others. Thus guaiacum or logwood impart little to aqueous liquors, without a boiling heat, whilſt even a ſmall degree of warmth proves greatly prejudicial to the fine bitter of carduus benedictus. This plant, which, infuſed in boiling, or digeſted in ſenſibly hot water, gives a nauſeous taſte, ſo offenſive to the ſtomach as to promote vomiting; yields to the cold element a grateful balſamic bitter, the moſt elegant ſtomachic of the ſhops.

As heat promotes the diſſolving power of liquids; ſo cold, on the other hand, diminiſhes it. Hence tinctures, or extractions made by a conſiderable heat, depoſit in cold weather a part of their contents, and thus become proportionably weaker: a circumſtance which deſerves particular regard.

SECT. III.

Depuration.

THERE are different methods of *depurating* or purifying liquors from their feculencies, according as the liquor itſelf is more or leſs tenacious, or the feculent matter of greater or leſs gravity.

Thin fluids readily depoſit their more ponderous impurities, upon ſtanding at reſt for ſome time, in a cool place; and may then be DECANTED, or poured off clear, by inclining the veſſel.

Glutinous, unctuous, or thick ſubſtances, are to be liquefied by a ſuitable heat; when the groſſer feculencies will fall to the bottom; the lighter ariſing to the ſurface, to be DESPUMATED or ſcummed off.

Where the impurities are neither ſo ponderous as to ſubſide freely to the bottom, nor ſo light as to ariſe readily to the ſurface; they may be ſeparated in great meaſure by COLATURE through ſtrainers of linen, woollen, or other cloth; and more perfectly by FILTRATION through a ſoft bibulous kind of paper made for this uſe.

The *grey* paper, which covers pill-boxes as they come from abroad, is one of the beſt for this purpoſe: it does not eaſily break when wetted, or tinge the liquor which paſſes through it, which the reddiſh ſort, called *bloſſom* paper, frequently does. The paper is ſupported by a funnel, or piece of canvas fixed in a frame. When the funnel is uſed, it is convenient to put ſome ſtraws or ſmall ſticks between the paper and its ſides, to prevent the weight of the liquor from preſſing the paper ſo cloſe to it, as not to allow room for this fluid to tranſude. In ſome caſes a funnel made of wire is put betwixt the paper and the glaſs funnel. There is alſo a kind of glaſs funnel, with ridges down its ſides, made on purpoſe for this uſe.

Glutinous and unctuous liquors, which do not eaſily paſs through the pores of a filter or ſtrainer, are CLARIFIED, by beating them up with the whites of eggs, which, concreting or growing hard when heated, and entangling the impure matter, ariſe with it to the ſurface: the mixture is to be gently boiled, till the ſcum begins to break, when the veſſel is to be removed from the fire, the cruſt taken off, and the liquor paſſed through a flannel bag.

Decantation, colature, and filtration, are applicable to moſt of the medicated liquors that ſtand in need of purification. Deſpumation and clarification very rarely have place; ſince theſe, along with the impurities of the liquor, frequently ſeparate its medicinal parts. Thus, if the decoction of poppy heads, for making diacodium, be ſolicitouſly ſcummed or clarified (as ſome have been accuſtomed to do) the medicine will loſe almoſt all that the poppies communicated, and inſtead of a mild opiate, turn out little other than a plain ſyrup of ſugar.

It may be proper to obſerve, that the common ſorts of filtering paper are apt to communicate a diſagreeable flavour: and, hence, in filtering fine bitters, or other liquors, whoſe gratefulneſs is of primary conſequence, the part, which paſſes through firſt, ought to be kept apart for inferior purpoſes.

SECT. IV.

Cryſtallization.

WATER, aſſiſted by heat, diſſolves a larger proportion of ſaline ſubſtances than it can retain when grown cold: hence, on the abatement of the heat, a part of the ſalt ſeparates from the menſtruum, and concretes at the ſides and bottom of the veſſel. The concretions, unleſs too haſtily formed by the ſudden cooling of the liquor, or diſturbed in their coaleſcence by agitation, or other like cauſes, prove tranſparent, and of regular figures, reſembling in appearance the natural ſprig-CRYSTALS.

Salts, diſſolved in a large quantity of water, may, in like manner, be recovered from it in their cryſtalline form, by boiling down the ſolution, till ſo much of the fluid has exhaled, as that the remainder will be too little to keep the ſalt diſſolved when grown perfectly cold. It is cuſtomary to continue the evaporation, till the ſalt ſhews a diſpoſition to concrete even from the hot water, by forming a pellicle on that part which is leaſt hot, viz. on the ſurface. If large, beautiful and perfectly-figured cryſtals are required, this point of time is ſomewhat too late: for if the ſalt thus begin to coaleſce whilſt conſiderably hot, on being removed into a cold place, its particles will run too haſtily and irregularly together; the pellicle at the ſame time falling down through the liquor, and thus proving a further diſturbance to the regularity of the cryſtallization.

In order to perform this proceſs in perfection, the evaporation muſt be gentle, and continued no longer than till ſome drops of the liquor, let fall on a cold glaſs plate, diſcover cryſtalline filaments. When this mark of ſufficient exhalation appears, the veſſel is to be immediately removed from the fire into a leſs warm, but not cold place, and covered with a cloth, to prevent the acceſs of cold air, and conſequently the formation of a pellicle.

All the alkaline ſalts are excluded from this operation; fixt alkalies never aſſuming a cryſtalline form; and the volatile ones eſcaping before the menſtruum exhales. Some even of the neutral kind, particularly thoſe, of which certain metallic bodies are the baſis, are ſo ſtrongly retained by the aqueous fluid, as not to exhibit any appearance of cryſtallization, unleſs ſome other ſubſtance be added, with which the water has a greater affinity. The table of affinity ſhews, that ſuch a ſubſtance is ſpirit of wine; by the prudent addition of which, theſe kinds of ſalts ſeparate freely from the menſtruum, and form large and beautiful cryſtals, ſcarce obtainable by any other means.

The operator muſt be careful not to add too much of the ſpirit; leſt, inſtead of a gradual and regular cryſtallization, the baſis of the ſalt be haſtily precipitated in a powdery form. One twentieth part of the weight of the liquor will in moſt caſes be a ſufficient, and in ſome too large a quantity.

Different ſalts require different quantities of water to keep them diſſolved: and, hence, if a mixture of two or more be diſſolved in this fluid, they will begin to ſeparate and cryſtallize at different periods of the evaporation. Upon this foundation, ſalts are freed, not only from ſuch impurities, as water is not capable of diſſolving and carrying through the pores of a filter, but likewiſe from admixtures of one another; that which requires moſt water to diſſolve it, ſhooting firſt into cryſtals.

SECT. V.

Precipitation.

BY this operation, bodies are recovered from their ſolutions, by means of the addition of ſome other ſubſtance, with which either the menſtruum, or the body diſſolved, have a greater affinity than they have with one another.

Precipitation, therefore, is of two kinds; one, where the ſubſtance ſuperadded unites with the menſtruum, and occaſions that before diſſolved to be thrown down: the other, in which it unites with the diſſolved body, and falls along with it to the bottom. Of the firſt we have an example in the precipitation of ſulphur from alkaline lixivia, by the means of acids; of the ſecond, in the precipitation of mercury from aqua-fortis by ſea ſalt, or its acid.

The ſubjects of this operation, as well thoſe which are capable of being precipitated as thoſe which precipitate them, will readily appear from inſpection of the table of affinity. The manner of performing it is ſo ſimple, as not to ſtand in need of any particular directions;

rections; no more being required, than to add the precipitant by degrees, ſo long as it continues to occaſion any precipitation. When the whole of the powder has fallen, it is to be well EDULCORATED, that is, waſhed in ſeveral freſh parcels of water, and afterwards dried for uſe.

Where metals are employed as precipitants, as in the purification of martial vitriol from copper by the addition of freſh iron, they ought to be perfectly clean and free from any ruſty or greaſy matter; otherwiſe they will not readily, if at all, diſſolve, and conſequently the precipitation will not ſucceed; for the ſubſtance to be precipitated ſeparates only by the additional one's diſſolving and taking its place. The ſeparated powder, often, inſtead of falling to the bottom, lodges upon the precipitant, from which it muſt be occaſionally ſhaken off, for reaſons ſufficiently obvious.

Though, in this operation, the precipitated powder is generally the part required for uſe, yet ſome advantage may frequently be made of the liquor remaining after the precipitation. Thus when fixt alkaline ſalt is diſſolved in water, and ſulphur diſſolved in this lixivium; the addition of acids ſeparates and throws down the ſulphur, only by virtue of the acid's uniting with, and neutralizing the alkali by which the ſulphur was held diſſolved: conſequently, if the precipitation be made with the vitriolic acid, and the acid gradually dropt in till the alkali be completely ſatiated, that is, ſo long as it continues to occaſion any precipitation or turbidneſs, the liquor will yield, by proper evaporation and cryſtallization, a neutral ſalt, compoſed of the vitriolic acid and fixt alkali, that is, vitriolated tartar. In like manner, if the precipitation be made with the nitrous acid, a true nitre may be recovered from the liquor; if with the marine, the ſalt called *ſpiritus ſalis marini coagulatus*; and if with the acid of vinegar, the *ſal diureticus.*

SECT. VI.

Evaporation.

THIS is a third method of recovering ſolid bodies from their ſolutions, effected by the means of heat; which *evaporating* the fluid part, that is, forcing it off in ſteam, the matter which was diſſolved therein is left behind in its ſolid form.

This proceſs is applicable to the ſolutions of all thoſe ſubſtances which are leſs volatile than the menſtruum, or which will not exhale by the heat requiſite for the evaporation of the fluid; as the ſolutions of fixt alkaline ſalts; of the gummy, gelatinous, and other inodorous parts of vegetables and animals in water; and of many reſinous and odorous ſubſtances in ſpirit of wine.

Water extracts the virtues of ſundry fragrant aromatic herbs, almoſt as perfectly as rectified ſpirit of wine: but the aqueous infuſions are far from being equally ſuited to this proceſs, with thoſe made in ſpirit; water carrying off the whole odour and flavour of the ſubject, which that lighter liquor leaves entire behind it. Thus a watery infuſion of mint loſes in evaporation the ſmell, taſte, and virtues of the herb; while a tincture drawn with pure ſpirit, yields, on the ſame treatment, a thick balſamic liquid, or ſolid gummy reſin, extremely rich in the peculiar qualities of the mint.

In evaporating theſe kinds of liquors, particular care muſt be had, towards the end of the proceſs, that the heat be very gentle; otherwiſe the matter, as it grows thick, will burn to the veſſel, and contract a diſagreeable ſmell and taſte: this burnt flavour is called an *empyreuma.* The liquor ought to be kept ſtirring during the evaporation; otherwiſe a part of the matter concretes on the ſurface expoſed to the air, and forms a pellicle which impedes the further evaporation. (More particular directions, for performing this operation to the greateſt advantage, will be given hereafter in the ſecond part.)

SECT. VII.

Diſtillation.

IN the foregoing operation fluids are rarefied by heat into ſteam or vapour, which is ſuffered to exhale in the air, but which the buſineſs of diſtillation is to collect and preſerve. For this purpoſe the ſteam is received in proper veſſels, luted to that in which the ſubject is contained; and being there cooled, condenſes into a fluid form again.

There are two kinds of diſtillation: by the one, the more ſubtile and volatile parts of liquors are elevated from the groſſer; by the other, liquids, incorporated with ſolid bodies, are forced out from them by vehemence of fire.

To the firſt belong, the diſtillation of the pure inflammable ſpirit from vinous liquors; and of ſuch of the active parts of vegetables as are capable of being extracted by boiling water or ſpirit, and at the ſame time ariſing along with their ſteam.

As boiling water extracts or diſſolves the eſſential oils of vegetables, while blended with the other principles of the ſubject, without ſaturation, but imbibes only a determinate, and that a ſmall proportion of them in their pure ſtate; as theſe oils are the only ſubſtances contained in common vegetables, which prove totally volatile in that degree of heat; and as it is in them that the virtues of aromatics, and the peculiar odour and flavour of all plants, reſide; it is evident, that water may be impregnated, by diſtillation, with the more valuable parts of many vegetables: that this impregnation is limited, the oil ariſing in this proceſs pure from thoſe parts of the plant which before rendered it ſoluble in water without limitation (hence greateſt part of the oil ſeparates from the diſtilled aqueous liquor, and, according to its greater or leſs gravity, either ſinks to the bottom or ſwims on the ſurface): and that, conſequently, infuſions and diſtilled waters are greatly different from one another; that the firſt may be rendered ſtronger and ſtronger by pouring the liquor on freſh parcels of the ſubject; but that the latter cannot be in like manner improved by *cohobating*, or re-diſtilling them from freſh ingredients. See Part II. Chap. v. Sect. 2.

As the oils of many vegetables do not freely diſtil with a leſs heat than that in which water boils; as rectified ſpirit of wine is not ſuſceptible of this degree of heat; and as this menſtruum totally diſſolves theſe oils in their pure ſtate, it follows, that ſpirit elevates far leſs from moſt vegetables than water; but that nevertheleſs the diſtilled ſpirit, by keeping all that it does elevate perfectly diſſolved, may, in ſome caſes, prove as ſtrong of the ſubject as the diſtilled water.

The apparatus made uſe of for diſtilling ſpirits, waters, and oils, conſiſt of a *ſtill*, or copper veſſel, for containing the ſubject, on which is luted a large *head* with a *ſwan neck*. The vapour ariſing into the head, is hence conveyed through a *worm*, or long ſpiral pipe, placed in a veſſel of cold water called a *refrigeratory*; and being there condenſed, runs down into a *receiver*. In the ſecond part of this work, we ſhall give ſome improvements in this apparatus for particular purpoſes; with directions for performing the ſeveral proceſſes to the greateſt advantage.

It may be obſerved, that as the parts which are preſerved in evaporation cannot ariſe in diſtillation, the liquor remaining after the diſtillation, properly depurated and inſpiſſated, will yield the ſame extracts as thoſe prepared from the tincture or decoction of the ſubject made on purpoſe for that uſe; the one of theſe operations collecting only the volatile parts, and the other the more fixt; ſo that where one ſubject contains medicinal parts of both kinds, they may thus be obtained diſtinct, without one's being injured by the proceſs which collects the other.

The ſubjects of the ſecond kind of diſtillation are, the groſs oils of vegetables and animals, the mineral acid ſpirits, and the metallic fluid quickſilver; which, as they require a much ſtronger degree of heat to elevate them than the foregoing liquors can ſuſtain, ſo they likewiſe condenſe without ariſing ſo far from the action of the fire. The diſtillation of theſe is performed in low glaſs veſſels, called, from their necks being bent to one ſide, *retorts*: to the further end of the neck a *receiver* is luted, which ſtanding without the furnace,

nace, the vapours ſoon condenſe in it, without the uſe of a refrigeratory: nevertheleſs, to promote this effect, ſome are accuſtomed, eſpecially in warm weather, to cool the receiver, by occaſionally applying wet cloths to it, or keeping it partly immerſed in a veſſel of cold water.

The vapours of ſome ſubſtances are ſo ſluggiſh, or ſtrongly retained by a fixt matter, as ſcarce to ariſe even over the low neck of the retort. Theſe are moſt commodiouſly diſtilled in ſtraight-necked earthen veſſels, called *longnecks*, laid on their ſides, ſo that the vapour paſſes off laterally with little or no aſcent: a receiver is luted to the end of the neck without the furnace: in this manner, the acid ſpirit of vitriol is diſtilled. The matter which remains in the retort or longneck, after the diſtillation, is vulgarly called *caput mortuum*.

In theſe diſtillations, a quantity of elaſtic air is frequently generated; which, unleſs an exit is allowed it, blows off or burſts the receiver. The danger of this may, in good meaſure, be prevented, by ſlowly raiſing the fire; but more effectually, by leaving a ſmall hole in the luting, to be occaſionally opened or ſtopt with a wooden plug; or inſerting at the juncture an upright pipe of ſuch a height, that the ſteam of the diſtilling liquor may not be able to riſe to the top.

SECT. VIII.

Sublimation.

AS all fluids are volatile by heat, and, conſequently, capable of being ſeparated, in moſt caſes, from fixed matters, by the foregoing proceſs; ſo various ſolid bodies are ſubjected to a ſimilar treatment. Fluids are ſaid to *diſtil*, and ſolids to *ſublime*; though ſometimes both are obtained in one and the ſame operation. If the ſubliming matter concrete into a maſs, it is commonly called a *ſublimate*; if into a powdery form, *flowers*.

The principal ſubjects of this operation are, volatile alkaline ſalts; neutral ſalts compoſed of volatile alkalis and acids, as ſal ammoniac; the ſalt of amber, and flowers of benzoine; mercurial preparations; and ſulphur. Bodies, of themſelves not volatile, are frequently made to ſublime by the mixture of volatile ones: thus iron is carried up by ſal ammoniac in the preparation of the *flores martiales*.

The fumes of ſolid bodies, in cloſe veſſels, riſe but a little way, and adhere to that part of the veſſel where they concrete. Hence a receiver or condenſer is leſs neceſſary here than in the preceding operation; a ſingle veſſel, as a *matraſs*, or tall *vial*, or the like, being frequently ſufficient. The moſt commodious apparatus for the ſublimation of particular ſubſtances, and the moſt advantageous method of conducting the ſeveral proceſſes, will be delivered in the ſecond part.

SECT. IX.

Expreſſion.

THE *preſs* is chiefly made uſe of for forcing out the juices of ſucculent herbs and fruits; and the inſipid oils of the unctuous ſeeds and kernels.

The harder fruits, as quinces, require to be previouſly well beaten or ground; but herbs are to be only moderately bruiſed. The ſubject is then included in a hair bag, and preſſed betwixt wooden plates, in the common ſcrew-preſs, as long as any juice runs from it. See Part III. Chap. ii.

The expreſſion of oils is performed nearly in the ſame manner as that of juices; only, here, iron plates are ſubſtituted for the wooden ones there made uſe of. The ſubject is well pounded, and included in a ſtrong canvaſs bag, betwixt which and the plates of the preſs a hair-cloth is interpoſed.

The inſipid oils of all the unctuous ſeeds are obtained, uninjured, by this operation, if performed without the uſe of heat; which though it greatly promotes the extraction of the oil, at the ſame time impreſſes an ungrateful flavour, and increaſes its diſpoſition to grow rancid.

The oils expreſſed from aromatic ſubſtances generally carry with them a portion of their eſſential oil: hence the ſmell and flavour of the expreſſed oils of nutmegs and mace. They are very rarely found impregnated with any of the other qualities of the ſubject: oil of muſtard-ſeed, for inſtance, is as ſoft and void of acrimony as that of almonds, the pungency of the muſtard remaining entire in the cake left after the expreſſion.

SECT. X.

Exſiccation.

THERE are two general methods of exſiccating or drying moiſt bodies: in the one, their humid parts are exhaled by heat; in the other, they are imbibed or abſorbed by ſubſtances, whoſe ſoft and ſpongy texture adapts them to that uſe. Bodies intimately combined with, or diſſolved in, a fluid, as recent vegetables and their juices, require the firſt: ſuch as are only ſuperficially mixed, as when earthy or indiſſoluble powders are ground with water, are commodiouſly ſeparated from it by the ſecond.

Vegetables and their parts are uſually exſiccated by the natural warmth of the air: the aſſiſtance of a gentle artificial heat may, nevertheleſs, in general, be not only ſafely, but advantageouſly had recourſe to. By a moderate fire, even the more tender flowers may be dried, in a little time, without any conſiderable loſs, either of their odour or lively colour; which would, both, be greatly injured or deſtroyed by a more ſlow exſiccation in the air. Some plants indeed, particularly thoſe of the acrid kind, as horſe-radiſh, ſcurvy-graſs, and arum, loſe their virtues by this proceſs, however carefully performed: but far the greater number retain them unimpaired, and often improved.

The thicker vegetable juices may be exſiccated by the heat of the ſun; or, where this is not ſufficient, by that of a water-bath, or an oven moderately warm. The thinner juices may be gently boiled till they begin to thicken, and then treated as the foregoing: this proceſs, termed INSPISSATION OF EVAPORATION, has been ſpoken of already. The juices of ſome plants, as arum root, briony root, orris root, wild cucumbers, &c. ſeparate, upon ſtanding for ſome time, into a thick part, which falls to the bottom; and a thin aqueous one, which ſwims above it: this latter is to be poured off, and the firſt exſiccated by a gentle warmth: preparations of this kind have been uſually called FÆCULÆ; that of the wild cucumber, to be ſpoken of in its place, is the only one which practice now retains.

Indiſſoluble bodies mixed with water into a thick conſiſtence, may be eaſily freed from the greateſt part of it, by dropping them on a *chalk-ſtone*, or ſome powdered chalk preſſed into a ſmooth maſs, which readily imbibes their humidity. Where the quantity of fluid is large, as in the edulcoration of precipitates, it may be ſeparated by decantation or filtration.

SECT. XI.

Comminution.

COMMINUTION is the bare reduction of ſolid coherent bodies into ſmall particles or powder. The methods of effecting this are various, according to the texture of the ſubject.

Dry friable bodies, or ſuch as are brittle and not very hard, and mixtures of theſe with ſomewhat moiſt ones, are eaſily PULVERIZED in a *mortar*.

For very light, dry ſubſtances, reſins, and the roots of a tenacious texture, the mortar may in ſome caſes be previouſly rubbed with a little ſweet oil, or a few drops of oil to be occaſionally added: this prevents the finer powder of the firſt from flying off, and the others from cohering under the peſtle. Camphor is moſt commodiouſly powdered, by rubbing it with a little rectified ſpirit of wine.

Tough ſubſtances, as woods, the peels of oranges and lemons, &c. are moſt conveniently *raſped*; and ſoft oily bodies, as nutmegs, paſſed through a *grater*.

The comminution of the harder minerals, as calamine, cryſtal, flint, &c. is greatly facilitated by EXTINCTION; that is, by heating them red-hot, and quenching them in water: by repeating this proceſs a few times, moſt of the hard ſtones become eaſily pulverable. This proceſs, however, is not to be applied to any of the alkaline or calcareous ſtones; leſt, inſtead of an inſipid powder, we produce an acrimonious calx or lime.

Some metals, as tin, though ſtrongly cohering in their natural ſtate, prove extremely brittle when heated, inſomuch as to be eaſily divided into ſmall particles by dextrous agitation. Hence the officinal method of pulverizing tin, by melting it, and, at the inſtant of its beginning to return into a ſtate of ſolidity, briſkly ſhaking it in a wooden box. The comminution of metals, in this manner, is termed by the metallurgiſts GRANULATION.

On a ſimilar principle, certain ſalts, as nitre, may be reduced into powder in large quantity, by diſſolving them in boiling water, ſetting the ſolution over a moderate fire, and keeping the ſalt conſtantly ſtirring during its exſiccation, ſo as to prevent its particles, disjoined by the fluid, from re-uniting together into larger maſſes.

Powders are reduced to a great degree of fineneſs by TRITURATING, or rubbing them, for a length of time, in a mortar. Such as are not diſſoluble in water, or injured by the admixture of that fluid, are moiſtened with it into the conſiſtence of a paſte, and LEVIGATED, or ground, on a flat ſmooth *marble* or *iron plate*; or where a large quantity is to be prepared at a time, in *mills* made for that uſe.

Comminution, though one of the moſt ſimple operations of pharmacy, has, in many caſes, very conſiderable effects. The reſinous purgatives, when finely triturated, are more eaſily ſoluble in the animal fluids, and conſequently prove more cathartic, and leſs irritating, than in their groſſer ſtate. Crude antimony, which, when reduced to a tolerable fine powder, diſcovers little medicinal virtue, if levigated to a great degree of ſubtility, proves a powerful alterative in many chronical diſorders.

By comminution, the heavieſt bodies may be made to float in the lighteſt fluid*, for a longer or ſhorter time, according to their greater or leſs degree of tenuity. Hence we are furniſhed with an excellent criterion of the fineneſs of certain powders, and a method of ſeparating the more ſubtile parts from the groſſer, diſtinguiſhed by the name of ELUTRIATION, or *waſhing over*. See Part III. Chap. i.

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* Some attribute this effect to a diminution of the ſpecific gravity of the body; and, at the ſame time, ſuppoſe the peculiar virtues of certain medicines, particularly mercury, to be in great meaſure owing to their gravity.

SECT. XII.

Fuſion.

FUSION is the reduction of ſolid bodies into a ſtate of fluidity by fire. Almoſt all natural ſubſtances, the pure earths and the ſolid parts of animals and vegetables excepted, melt in proper degrees of fire; ſome in a very gentle heat, while others require its utmoſt violence.

Turpentine, and other ſoft reſinous ſubſtances, LIQUEFY in a gentle warmth; wax, pitch, ſulphur, and the mineral bitumens, require a heat too great for the hand to ſupport; fixt alkaline ſalts, common ſalt, nitre, require a red, or almoſt white heat to MELT them; and glaſs, a full white heat.

Among metallic ſubſtances, tin, biſmuth, and lead, flow long before ignition: antimony likewiſe melts before it is viſibly red-hot, but not before the veſſel is conſiderably ſo: the regulus of antimony demands a much ſtronger fire. Zinc begins to melt in a red heat; gold and ſilver require a low white heat; copper a bright white heat; and iron, an extreme white heat.

One body, rendered fluid by heat, becomes ſometimes a menſtruum for another, not fuſible of itſelf in the ſame degree of fire. Thus red-hot ſilver melts, upon being thrown into melted lead leſs hot than itſelf: and thus if ſteel, heated to whiteneſs, be taken out of the furnace, and applied to a roll of ſulphur, the ſulphur inſtantly liquefying, occaſions the ſteel to melt with it; hence the chalybs cum ſulphure of the ſhops. This concrete, nevertheleſs, remarkably impedes the fuſion of ſome other metals, as lead, which, when united with a certain quantity of ſulphur, is ſcarce to be

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gravity. If theſe hypotheſes were juſt, it ſhould follow, that the mercurial preparations, by being finely comminuted, would loſe proportionably their efficacy; and ſo indeed mercurius dulcis, for inſtance, has been ſuppoſed to do. But experience ſhews, that this is far from being the caſe; and that comminution by no means leſſens, but rather increaſes its power: when reduced to a great degree of ſubtility, it paſſes readily into the habit, and operates, according to its quantity, as an alterative or a ſialogogue; while, in a groſſer form, it is apt to irritate the ſtomach and bowels, and run off by the inteſtines, without being conveyed into the blood.

perfectly melted by a very ſtrong fire: hence the method, deſcribed in its place, of purifying zinc, a metal upon which ſulphur has no effect from the lead ſo frequently mixed with it.

Sulphur is the only unmetallic ſubſtance which mingles in fuſion with metals. Earthy, ſaline, and other matters, even the calces and glaſſes prepared from metals themſelves, float diſtinct upon the ſurface, and form what is called SCORIA or droſs. Where the quantity of this is large in proportion to the metal, it is moſt commodiouſly ſeparated by pouring the whole into a conical mould: the pure metal or REGULUS, though ſmall in quantity, occupies a conſiderable height in the lower narrow part of the *cone*, and when congealed, may be eaſily freed from the ſcoriæ by a hammer. The mould ſhould be previouſly greaſed, or rather ſmoked, to make the metal come freely out; and thoroughly dried and heated, to prevent the exploſion which ſometimes happens from the ſudden contact of melted metals with moiſt bodies.

SECT. XIII.

Calcination.

BY calcination is underſtood, the reduction of ſolid bodies, by the means of fire, from a coherent to a powdery ſtate, accompanied with a change of their quality; in which laſt reſpect, this proceſs differs from comminution.

To this head belong, the burning of vegetable and animal matters, otherwiſe called USTION, INCINERATION, or CONCREMATION; and the change of metals into a powder, which in the fire either does not melt, or VITRIFIES, that is, runs into glaſs.

The metals which melt before ignition, are calcined by keeping them in fuſion for ſome time. The free admiſſion of air is eſſentially neceſſary to the ſucceſs of this operation; and hence, when the ſurface of the metal appears covered with calx, this muſt be taken off, or raked to one ſide; otherwiſe the remainder, excluded from the air, will not undergo the change intended. If any coal, or other inflammable matter that does not contain a mineral acid, be ſuffered to fall into the veſſel, the effect expected from this operation will not be produced, and part of what is already calcined, will be REVIVED or REDUCED; that is, it will return into its metallic form again.

Thoſe metals which require a ſtrong fire to melt them, calcine with a much leſs heat than is ſufficient to make them flow. Hence the burning or SCORIFICATION of ſuch iron or copper veſſels, a are long expoſed to a conſiderable fire without defence from the air. Gold and ſilver are not calcinable by any degree of fire.

In calcination, the metals viſibly emit fumes; nevertheleſs, the weight of the calx proves greater than that of the metal employed. The antimonial regulus gains about one eleventh part of its weight; zinc, ſometimes one tenth; tin, above one ſixth; and lead, in its converſion into minium, often one fourth.

The calcination of metallic bodies (gold, ſilver, and mercury excepted) is greatly promoted by nitre. This ſalt, expoſed to the fire in conjunction with any inflammable ſubſtances, extricates their inflammable matter, and burſts with it into flame, accompanied with a hiſſing noiſe: this proceſs is uſually termed DEFLAGRATION or DETONATION.

All the metallic calces and ſcoriæ are revived into this metallic ſtate, by fuſion with any vegetable or animal inflammable matter. They are all more difficult of fuſion than the reſpective metals themſelves; and ſcarcely any of them, thoſe of lead and biſmuth excepted, can be made to melt at all, without ſome addition, in the ſtrongeſt fire that can be produced in the common furnaces. The additions, called fluxes, employed for promoting the fuſion, conſiſt chiefly of fixt alkaline ſalts: a mixture of alkaline ſalt with inflammable matter, as powdered charcoal, is called a *reducing flux*, as contributing at the ſame time to bring the calx into fuſion, and to revive it into metal. Such a mixture is commonly prepared from one part of nitre, and two parts of tartar; by grinding them well together, ſetting the powders on fire with a bit of coal, or a red-hot iron, then covering the veſſel, and ſuffering them to deflagrate or burn, till they are changed into a black alkaline coaly maſs. This is the common reducing flux of the chemiſts, and called from its colour the *black flux*. Metallic calces, or ſcoriæ, mingled with twice their weight of this compound, and expoſed to a proper fire, in a cloſe covered crucible, melt, and reſume their metallic form; but, though they received an increaſe of weight in the calcination, the revived metal is always found to weigh conſiderably leſs than the quantity from which the calx was made.

PART II.

THE

MATERIA MEDICA.

WRITERS on the materia medica have taken great pains in arranging the various articles, of which it is compoſed, into different diviſions and ſubdiviſions, according to their real or reputed medicinal powers.

It has been imagined, that "the whole materia medica is re-"ducible under the three diſtinctions of *alteratives*, *evacuants*, and "*reſtoratives:* the firſt comprehending all that has any power to "alter the conſtitution, without ſenſibly increaſing or diminiſh-"ing any of the natural evacuations; the ſecond, whatever viſi-"bly promotes thoſe diſcharges; and the third, all that contri-"butes to leſſen them, and make the increaſe greater than the "waſte." Theſe diviſions being too general, they are broke into ſubdiviſions; and theſe again are further divided into different claſſes, under more reſtrained denominations, as cardiac, carminative, hyſteric, ſtomachic, &c.

Specious as this plan may appear to be, I am afraid that the execution of it, to any uſeful purpoſe, would require a far more extenſive knowledge of the nature and operation of medicines than has yet been attained to. A juſt and uſeful method of ſimples is ſcarcely to be expected, while thoſe properties, on which the method is founded, are imperfectly known, and in many articles only conjectural.

In all the arrangements that have been hitherto contrived upon this plan, there appears a ſtriking incongruity among the ſeveral articles of which even the ultimate ſubdiviſions are compoſed; ſubſtances extremely diſſimilar being claſſed together, as cantharides and tea, tobacco and bran, hemlock and cowſlips, ſcurvygraſs and raiſins, arum root and liquorice, wormwood and parſneps, cinnamon and nettles, raſberries and chalk, artichokes and alum, cloves and coffee, muſtard ſeed and black cherries, &c. Nor are theſe incongruities to be laid always to the charge of the authors; the nature of the ſyſtem itſelf renders them often unavoidable: for the particular effect, which entitles a medicine to a particular claſs, may be produced by ſubſtances very diſſimilar, and even oppoſite in their general powers: thus the alvine excretions are reſtrained by ſtarch, wax, tormentil root, opium: among the capital diuretics are cantharides, nitre, fixt alkaline ſalts, ſquills. It ſhould ſeem, that the method of arrangement cannot be a juſt one, which requires ſubſtances ſo diſcordant to be ranked together; and which farther requires each of theſe ſubſtances to be ranked over again, in other claſſes, along with other ſubſtances to which they are equally diſcordant.

There is alſo a material imperfection in this ſcheme, even in the primary diviſions. Steel and its preparations act, in different circumſtances, both as evacuants and reſtoratives. Mercury and antimony afford, in their different preparations, both evacuants and alteratives; and there are many other drugs which are ſometimes uſed as alteratives, and ſometimes as evacuants: indeed, all evacuants, in diminiſhed doſes, ſeem to act merely as alteratives. It ſhould ſeem therefore that "the diviſion of the whole materia medica into alteratives, evacuants, and reſtoratives," is a diviſion not founded in nature, even if there were no objection to the vague meaning of the appellations themſelves.

Cartheuſer has divided the materia medica on a plan which appears more rational. Inſtead of the operations of medicines in the human body, which are precarious, complicated, and greatly diverſified, according to the doſe, the preparation, and the circumſtances of the patient, he takes for the baſis of his arrangement, their more ſimple, obvious, and conſtant properties, as bitterneſs, ſweetneſs, aſtringency, acidity, &c. Having conſidered the nature of bitterneſs, for inſtance, in general, he examines what effects medicines poſſeſſed of this property are capable of producing in the body, and in what circumſtances they may be expected to be ſerviceable, and then proceeds to an account of the particular bitters.

This method is of real uſe, but its uſe is limited to a ſmall part of the materia medica. There are many of the medicinal ſimples, in which we can diſtinguiſh no prevailing qualities of this kind; there are many, in which different qualities are blended together; and many, which though ſimilar in theſe kinds of qualities, are very diſſimilar in their operations in the human body. Thus though gentian and aloes agree in having a bitter taſte, and ſugar and manna in being ſweet, their medicinal virtues are reſpectively very different. Accordingly the author is obliged in ſome caſes to depart from his general plan, and found the diviſion on the medicinal effects: he makes one claſs of purgatives and emetics, and another of vapouroſe inebriants and narcotics: this laſt claſs conſiſts of tobacco, elder-flowers, ſaffron, opium, and poppy ſeeds; ſubſtances certainly very diſcordant in all their qualities that relate to medical intentions.

In this work, inſtead of attempting a medicinal diſtribution of the ſimples, which I apprehend not to be practicable, to any good purpoſe, and which, as hitherto executed, ſeems more likely to miſlead the reader than to promote true knowledge, I ſhall take them in the order of the alphabet; and even in this order we ſhall ſeldom perhaps find ſubſtances more diſſimilar come together, than thoſe which have been joined in one claſs by ſome of the ſyſtematic writers. It may be proper, however, to premiſe ſome general obſervations on certain claſſes of medicines, in Cartheuſer's manner, and thus to preſerve the leſs exceptionable parts of his plan, with ſome amendments.

ACIDS.

Claſs 1. *Vegetable*
native; as ſorrel, wood-ſorrel, juice of lemons, oranges, barberries, and other fruits.
produced by fermentation; as vinegar and tartar.

Claſs 2. *Mineral:* the acids of vitriol, nitre, and common ſalt.

THE medical effects of acids, duly diluted and given in proper doſes, are to cool, quench thirſt, correct a tendency to putrefaction, and allay inordinate motions of the blood. By theſe qualities, in hot bilious temperaments and inflammatory diſorders, they frequently reſtrain immoderate hæmorrhages, and promote the natural ſecretions; in ſome kinds of fevers, they excite a copious diaphoreſis, where the warm medicines, called alexipharmic, tend rather to prevent this ſalutary diſcharge.

Vegetable acids, particularly the native juices of certain plants and fruits, have ſome degree of a ſaponaceous quality; by means of which they attenuate or diſſolve viſcid phlegm, and deterge the veſſels; and thus prove ſerviceable in ſundry chronical diſorders. Inveterate ſcurvies have ſometimes yielded to their continued uſe, eſpecially when given in conjunction with medicines of the acrid or pungent kind. Experience has ſhewn, that the acrid antiſcorbutics have much better effects when thus managed, than when exhibited by themſelves; hence in the *ſucci ſcorbutici* of our diſpenſatory, Seville orange juice is uſefully joined to that of the *cochlearia* and *naſturtium*.

The mineral acids inſtantly coagulate blood: the vegetable dilute it, even when inſpiſſated or thickened by heat; in which ſtate, watery liquors will not mingle with it. Hence, in ſome fevers, where water runs off by the kidneys almoſt as pale and inſipid as it was drunk, vegetable acids render the urine of the due colour and quality. The mineral acids (the ſpirit of nitre in particular) combined with vinous ſpirits, have a like effect.

Acids are prejudicial in cold, pale, phlegmatic habits, where the veſſels are lax, the circulation languid,

guid, bile deficient, and the power of digeſtion weak. In theſe caſes, an acid is often generated in the ſtomach, from milk and moiſt vegetable food, which, while it continues in the firſt paſſages, occaſions uneaſineſs about the ſtomach, flatulencies, ſometimes griping pains of the bowels, and vomitings.

INSIPID EARTHS *capable of* ABSORBING ACIDS.

Oyſter ſhells,
Crabs claws, and eyes ſo called,
Coral, red and white,
Pearls,
Bezoar,
Chalk,
Some marles,
Limeſtones,
Marbles,
Spars.

THE virtues of theſe ſubſtances are, to abſorb or deſtroy acidities in the firſt paſſages, and conſequently remove ſuch diſorders as proceed from that cauſe. The cordial, alexipharmic, antifebrile, and other like virtues, attributed to theſe medicines, appear to have little foundation; or, at beſt, are only ſecondary ones. When united with the acid, they form a neutral ſaline compound, poſſeſſing ſome degree of an aperient and detergent quality, though too inconſiderable to be in general regarded.

The abſorbent earths were all ſtrangers to medicine in the earlier times; and their uſe does not ſeem to have been eſtabliſhed before the laſt century; when ſome practitioners, from an opinion that moſt kinds of diſeaſes proceeded from a preternatural acid, introduced a great variety of antiacid bodies, both of the earthy and ſaline kind; and very liberally exhibited them on almoſt every occaſion.

It is certain that in children, and adults of a weak conſtitution, and whoſe food is chiefly of the vegetable aceſcent kind, ſundry diſorders are occaſioned by acidities; theſe readily diſcover themſelves by ſour eructations, the pale colour of the face, and in children by the ſour ſmell and green colour of the alvine fæces, which are ſometimes ſo manifeſtly acid as to raiſe a ſtrong effervescence with alkaline ſalts. In theſe caſes, and theſe only, the uſe of abſorbent earths is indicated.

If there be really no acid juices in the ventricle, theſe earths are apt to concrete with the mucous matter uſually lodged there, into hard indiſſoluble maſſes; which have ſometimes been thrown up by vomit, or found in the ſtomach upon diſſection. Hence indigeſtion, loſs of appetite, nauſeæ, vomiting, obſtructions of the bowels, and other diſorders. Sometimes the ſtomach and inteſtines have been found lined with a cruſt, as it were, of theſe earthy bodies, which muſt not only have prevented the ſeparation of the gaſtric liquor, but likewiſe cloſed the orifices of the lacteal veſſels, ſo as to obſtruct the paſſage of the chyle into the maſs of blood.

Some ſuppoſe the earthy powders capable (without the concurrence of any acid) of paſſing the lacteals along with the chyle; and alledge, in ſupport of this opinion, that when triturated with water, they are in part taken up, and carried with it through a filter of paper; the filtrated liquor leaving, upon evaporation, a portion of whitiſh earthy matter. This experiment (allowing the conſequence to be juſtly drawn from it) is itſelf erroneous: the reſiduum proceeds from the earth naturally contained in the water, not from that employed in the experiment; for if pure diſtilled water be made uſe of, it will leave no reſiduum, though long triturated, or digeſted with the earth.

All theſe bodies, particularly thoſe of the animal kind, contain, beſides their purely alkaline earth, a portion of glutinous matter. An inſtance of this we have in crabs eyes. If theſe be macerated in the weaker acids, or the ſtronger ſufficiently diluted with water; the earthy part will be diſſolved, and the animal glue remain in form of a ſoft tranſparent mucilage. The glutinous ſubſtance increaſes their tendency to concrete in the ſtomach; and, hence, thoſe which contain leaſt thereof ſhould be preferred to the others. The mineral earths contain the leaſt of this kind of matter, and ſome of them are very eaſy of ſolution; chalk for inſtance; which may therefore be given with greater ſafety than the animal abſorbents. Theſe ſubſtances, diveſted of their conglutinating matter by means of fire, are reduced into acrimonious calces or limes, and thus become medicines of a different claſs.

The teeth, bones, hoofs, and horns of animals, conſiſt of the ſame principles with the animal abſorbents above-mentioned, but combined in different proportions: the quantity of gelatinous matter is ſo large, as to defend the earthy part from the action of weak acids; while the earth, in its turn, protects the gluten from being eaſily diſſolved by watery liquors. Hence theſe bodies in their crude ſtate, though recommended as poſſeſſing ſingular virtues, are not found to have any virtue at all.

Experiments have been made for determining the degree of ſolubility, or comparative ſtrength, of theſe earths; the principal of which are arranged in the two following tables, one taken from Langius, and the other from Homberg.

Table of the quantity of acid deſtroyed by different abſorbents.

Ten grains of	destroyed the acidity of	drops of Spirit of Salt.
Some kinds of Limeſtones	160	
Oyſter ſhells	120	
Chalk	100	
Shells of Garden Snails	100	
Calcined Cray Fiſh	100	
Pearl	80	
Tooth of the Sea Horſe	80	
Volatile Salts	80	
Fixt Salts	60	
Coral, red and white	60	
Crabs eyes	50	
Eggſhells	50	
Mother of Pearl	50	
Crabs claws	40	
Jawbone of the Pike-fiſh	30	

Table of the quantity of abſorbent earths ſoluble in acids.

		grains.
576 grains of Spirit of Salt diſſolved of	Crabs eyes	216
	Mother of Pearl	144
	Pearls	128
	Oyſter ſhells	156
	Hartſhorn	165
	Coral	180
	Oriental Bezoar	118
	Occidental Bezoar	123
	Quick Lime	199
	Slacked Lime	193
576 grains of Spirit of Nitre diſſolved of	Crabs eyes	297
	Mother of Pearl	202
	Pearls	219
	Oyſter ſhells	236
	Hartſhorn	234
	Coral	233
	Oriental Bezoar	108
	Occidental Bezoar	144
	Quick Lime	180
	Slacked Lime	216

Theſe experiments do not ſufficiently aſcertain the point intended by them. In the firſt ſet, the quantity of acid is too vague and indetermined : in the ſecond, we are not told whether the acid was perfectly ſaturated : and, in both, the acids made uſe of were ſo very different from any that can be ſuppoſed ever to exiſt in the human body, that little can be concluded from them, with regard to the medical effects of theſe abſorbents. Trial ſhould have been made with the mild vegetable acids, as the juices of certain fruits, ſour fermented liquors ; or rather with ſour milk. Nevertheleſs, theſe tables, though not ſo perfect as could be wiſhed, have their uſe in the hands of ſuch as can make proper allowances (See the Experimental Hiſtory of the materia medica, page 557.)

EARTHS NOT DISSOLUBLE *in acids, or other liquors.*

The earths of this kind may be ranged in two claſſes :

Claſs I. *Hard cryſtalline earths:* as the ruby, garnet, emerald, ſapphire, hyacinth, and other precious ſtones ; cryſtal, flint, &c.

THESE kinds of ſubſtances were introduced into medicine, and many fabulous virtues attributed to them, by the ſuperſtition of the earlier ages. Some of them are ſtill preſerved in foreign pharmacopœias, but they are, at length, very juſtly expunged from ours, notwithſtanding what ſome writers of repute ſpeak of their medical virtue. Theſe indiſſoluble hard bodies are not capable of producing any other effect than, by their rigid angular particles (which, tho' levigated with the utmoſt care, the microſcope ſtill diſcovers in them), to offend or wound the inteſtines. In levigation they wear off ſo much from the hardeſt *marble* inſtruments, as will equal or exceed their own weight: from this circumſtance we may account for their having ſometimes appeared to act as *abſorbents*. Some of theſe ſtones, expoſed to a vehement fire, become in ſome meaſure friable; but, nevertheleſs, remain indiſſoluble. Moſt of the coloured ones by this treatment loſe their colour; and, in this ſtate, prove nearly of the ſame quality with common cryſtal; ſuch are, the ſapphire, emerald, amethyſt, and cornelian. Others melt into a blackiſh vitreous matter, from which a portion of iron is obtainable by proper fluxes; as the hyacinth and garnet. Geoffroy concludes hence, that theſe ſtones really poſſeſs ſome medical virtues, depending upon their metallic part; but the quantity of metallic matter, ſufficient to give them a conſiderable tinct, is ſo exceedingly ſmall, and ſo incloſed in a ſtony matter not at all ſoluble by any of the known menſtrua, and ſcarce to admit of any poſſibility of its acting in the human body.

Claſs 2. *Softer earths; the* talky, gypſeous, *and* argillaceous.

The talcs and gypſa have rarely been uſed as medicines. Some of the former, from their unctuous ſoftneſs and ſilver hue, ſtand recommended externally as coſmetics; and ſome of the latter, on little better foundation, internally, as aſtringents. But they have long been deſervedly rejected by the judicious practitioners. They ſeem to poſſeſs the ill qualities of the alkaline earths (concreting with the mucus of the ſtomach, &c.) without any of their good ones.

Several of the clays, boles, and terræ ſigillatæ, were highly celebrated by the ancients as aſtringents and alexipharmacs, and ſome of them ſtill continue in eſteem; though it is certain they have no great claim to the virtues that have been attributed to them. Their real effects are, to give a greater degree of conſiſtency to the fluids in the firſt paſſages, and in ſome meaſure defend the ſolids from their acrimony.

Moſt of theſe bodies contain, beſides the tenacious indiſſoluble earth, which is their principal characteriſtic, (1) a portion of an earth ſoluble in acids, ſimilar to thoſe of the firſt ſection; (2) of acid, ſeparable by diſtillation in a ſtrong fire: this acid is always of the ſame nature with that obtained from vitriol, ſulphur and alum; (3) The coloured ones contain likewiſe ſmall quantities of iron, reducible by inflammable fluxes, into its metallic form. In conſequence of the firſt of theſe ingredients, theſe earths may be looked upon in ſome meaſure as abſorbent: the acid appears to be united with a part of the abſorbent earth, into a ſaline compound, approaching to an alluminous nature; whence they have ſome degree of aſtringency. Whether they receive any peculiar virtue from the iron, is greatly to be doubted; ſince it is in a very crude ſtate, and in quantity extremely ſmall.

Theſe earths unite with water into a turbid liquor, ſlippery and ſmooth to the touch, and remain for ſome time ſuſpended; the ſand, grit, or other groſſer matters which are often found naturally mingled with them, ſubſiding. They may be freed by means of acids from their alkaline earth; by coction in water, from their ſaline matter; and the coloured ones, from their iron, by digeſtion, in aqua regis; the only menſtruum we are acquainted with that will extract the ferrugineous matter of argillaceous and bolar earths. Thus purified, they have all nearly the ſame appearance and qualities. Expoſed to a ſtrong fire, they loſe their ſoft glutinous quality, and are reduced into hard maſſes indiſſoluble as at firſt.

GLUTINOUS, *vegetable, and animal ſubſtances.*

Claſs. 1. *Vegetable.*

Pure gums.
Tragacanth,
Senica,
The gums of cherry, plum, and other European Trees.

Vegetables abounding with mucilage:
Orchis roots,
Althæa root,
Quince ſeeds, &c.

GUMS and mucilages are glutinous vegetable productions, of no particular taſte or ſmell, ſoluble in water, but not in vinous ſpirits, or in oils: ſee p. 13. They differ from one another, only in degree of tenacity: the more tenacious are called gums; thoſe which are leſs ſo, mucilages. The former naturally exude from certain trees and ſhrubs; the latter are extracted by art. Almoſt all vegetable ſubſtances contain ſome portion of theſe, which, after the reſinous part has been extracted by ſpirit, may be ſeparated from the remaining matter by means of water.

The general virtues of theſe kinds of ſubſtances, are to thicken the fluids, and defend the ſolids from them, when grown ſharp or corroſive. Hence their uſe in a thin acrimonious ſtate of the juices, and where the natural mucus of the inteſtines is abraded.

Claſs. 2. *Animal.*

MOST animal ſubſtances (the fat excepted) contain a viſcous matter, in many reſpects ſimilar to the foregoing, and capable of being extracted by ſtrong coction in water.

Animal glues and jellies have the general qualities of the vegetable gums and mucilages; with this difference, that the former are more nutrimental, and apt to run into a putrid ſtate. Conſidered as the ſubjects of chemiſtry, the difference betwixt them is very great: thoſe of the animal kind are changed by fire into a volatile alkaline ſalt and a fetid oil; the vegetable into an acid liquor, and a very ſmall portion of oily matter, conſiderably leſs fetid than the former.

Soft UNCTUOUS *ſubſtances.*

Claſs 1. *Inſipid vegetable oils; and Subſtances abounding with them,* as almonds, and the kernels of moſt fruits; linſeed, and the medullary part of ſundry other ſeeds.

Claſs 2. *Animal fats*; as ſpermaceti.

UNctuous vegetables unite with water, by trituration, into a milky liquor: and give out their oil upon expreſſion.—Theſe kinds of oils, and animal fats, diſſolve not in any menſtruum except alkaline ones; which change their quality, and reduce them into a ſoap, diſſoluble in water, but more perfectly in vinous ſpirits: from this compound, the oil may, by a ſkilful addition of acids, be recovered in a purer ſtate than before, and rendered ſoluble, like eſſential oils, in ſpirit of wine: ſee p. 10.

The medical virtues of theſe ſubſtances are, to obtund acrimonious humours, and to ſoften and relax the ſolids: hence their uſe internally, in tickling coughs, heat of urine, pains and inflammations; and, externally, in tenſion and rigidity of particular parts. The milky ſolutions, commonly called emulſions, though much leſs emollient than the oils themſelves or animal fats, have this advantage, that they may be given in acute or inflammatory diſtempers, without danger of the ill conſequences which the others might ſometimes produce. Fats and oils, kept in a degree of heat no greater than that of the human body, ſoon become rancid and acrimonious; while emulſions tend rather to grow ſour.

ASTRINGENTS.

Galls,
Tormentil root,
Biſtort root,
Balauſtines,
Terra Japonica,
Acacia, &c.

AStringent ſubſtances are diſtinguiſhed by a rough auſtere taſte: and by changing ſolutions of iron, eſpecially thoſe made in the vitriolic acid, of a dark purple or black colour.

Aſtringents yield their virtues by infuſion, both to water and vinous ſpirits, generally in greateſt perfection to the former. Oils extract nothing from them: nor do they give over any of their virtue in diſtillation: nevertheleſs, their aſtringency is conſiderably abated by evaporating decoctions of them to the conſiſtence of an extract; and totally deſtroyed by long keeping.

The medical effects of theſe kinds of ſubſtances are, to conſtringe the fibres, and incraſſate, or lightly thicken the juices. Their more experienced uſe is in diſorders proceeding from a debility, or flaccid ſtate, of the ſolids; in hæmorrhages, from a thinneſs of the blood, laxity or rupture of the veſſels; in preternatural difdiſcharges of other kinds, after the offending matter has been duly corrected, or evacuated; and in external relaxations.

In ſome caſes, they produce the effects of aperients; the veſſels, conſtringed and ſtrengthened by them, being enabled to protrude the circulating juices with greater force.

A good deal of caution is requiſite in the uſe of theſe medicines, eſpecially thoſe of the more powerful kind. In plethoric habits, inveterate obſtructions, critical evacuations, and in all kinds of fluxes in general, before the morbific matter has been expelled, or where there is any ſtricture or ſpaſmodic contraction of the veſſels; aſtringents prove eminently hurtful. Where critical dyſenteries or diarrhœas are reſtrained by ſtyptics, the acrimonious matter, now confined in the inteſtines, corrodes or inflames them; and ſometimes occaſions a gangrene of the parts.

SWEETS.

Sugar,
Honey,
Raiſins,
Liquorice, &c.

THE vegetable ſweets are a very numerous tribe; almoſt every plant that has been examined, diſcovering in ſome of its parts, a ſaccharine juice. The bottoms of flowers, and moſt kinds of ſeeds and grain, when they begin to vegetate, are remarkably ſweet.

Vegetable ſweets are extracted both by water and vinous ſpirits; moſt readily by the former, but in greateſt perfection by the latter. Nothing of their taſte ariſes in diſtillation with either of theſe liquors: nevertheleſs, by long boiling with water they become ſomewhat leſs agreeable; but are not much injured by being treated in the ſame manner with rectified ſpirit.

The purer ſweets, as ſugar, promote the union of diſtilled oils with watery liquors, and prevent the ſeparation of the butyraceous part from milk: from this quality, they are ſuppoſed to unite the unctuous part of the food with the animal juices. Hence ſome have concluded, that they increaſe fat: others, that they have a contrary effect, by preventing the ſeparation of the unctuous matter, which forms the fat, from the blood: and others, that they render the juices thicker and more ſluggiſh, retard the circulation and cuticular excretion, and thus bring on a variety of diſorders. But ſweets have not been found to produce any of theſe effects, in any remarkable degree: common experience ſhews, that their moderate, and even liberal uſe, is at leaſt innocent; that they reconcile, not only to the palate, but the ſtomach alſo, ſubſtances of themſelves diſguſtful to both; and thus render ſalutary what would otherwiſe be injurious to the body.

The unctuous and mucilaginous ſweets, as the impure ſugars, liquorice, &c. have a conſiderable degree of emollient and lubricating virtue.—Thoſe, accompanied with a manifeſt acid, as in the juices of moſt ſweet fruits, are remarkably relaxing; and, if taken immoderately, occaſion diarrhœæ and dyſenteries, which ſometimes have proved fatal.

ACRIDS.

Acrids are ſubſtances of a penetrating pungency. Applied to the ſkin, they inflame or exulcerate it; chewed, they occaſion a copious diſcharge of ſaliva: and ſnuffed up the noſe, provoke ſneezing.

Theſe ſubſtances, conſidered as the ſubjects of pharmacy, may be divided into three claſſes,

yielding their acrimony
1. In diſtillation with water: as horſe-radiſh, muſtard, ſcurvy-graſs, &c.
2. By infuſion only: as the greater celandine, pyrethrum, &c.
3. Neither to infuſion nor diſtillation: as arum and dracunculus.

The general effects of acrid medicines are, to ſtimulate the veſſels, and diſſolve tenacious juices. In cold leucophlegmatic habits, ſtagnations of the fluids, and where the contractive power of the ſolids is weak, they prove powerful expectorants, deobſtruents, diuretics, and emmenagogues; and if the patient be kept warm, ſudorifics. In hot bilious conſtitutions, plethoric habits, inflammatory diſtempers, where there is already a degree of irritation, where the juices are too thin and acrimonious, or the viſcera unſound; theſe ſtimulating medicines prove highly prejudicial, and never fail to aggravate the diſeaſe.

Certain acrid ſubſtances have been recommended in dry convulſive aſthmas: of the efficacy of the ſquill in particular, for the cure of this diſorder, ſeveral inſtances are related in the Commercium literarium of Norimberg for the years 1737 and 1739. Cartheuſer thinks, that not the aſthma itſelf, but a particular effect of it, was removed by this medicine. He obſerves, that, in all aſthmas, the free circulation of the blood through the pulmonary veſſels is impeded: and, hence, during every paroxyſm, the lungs are in a kind of œdematous ſtate: that if this œdema, becoming habitual, remain after the fit is over, it is either perpetually occaſioning freſh ones, or gives riſe to a dropſy of the breaſt: that acrid medicines, by removing the œdema, remove what was originally an effect of the aſthma, and will be, in time, a cauſe of its aggravation.

AROMATICS.

Aromatics are ſubſtances of a warm pungent taſte, and a more or leſs fragrant ſmell. Some of the ſpices are purely aromatic, as cubebs, pepper, cloves; ſome ſubſtances have a ſweetneſs mixed with the aromatic matter, as angelica root, aniſeed, fennel ſeed; ſome an aſtringency, as cinnamon; ſome a ſtrong mucilage, as caſia lignea; ſome a bitterneſs, as orange peel. The aromatic matter itſelf, contained in different ſubjects, differs alſo not a little in its pharmaceutic properties. It is extracted from all by rectified ſpirit of wine;

from ſome in great part, from others ſcarcely at all, by water. The aromatic matter of ſome ſubjects, as of lemon peel, riſes wholly in diſtillation, both with ſpirit and water; that of others, as cinnamon, riſes wholly with water, but ſcarcely at all with ſpirit; while that of others, as pepper, is in part left behind, after the diſtillation of water itſelf from the ſpice.

With regard to the general virtues of aromatics, they warm the ſtomach, and by degrees the whole habit, raiſe the pulſe, and quicken the circulation. In cold languid caſes, phlegmatic habits, and a weak flaccid ſtate of the ſolids, they ſupport the vis vitæ, and promote the ſalutary ſecretions. In hot bilious temperaments, plethoric habits, inflammatory indiſpoſitions, dryneſs and ſtrictures of the fibres, they are generally hurtful.

BITTERS.

Gentian root,
Hops,
Leſſer centaury,
Carduus, &c.

BItters for the moſt part yield their virtue both to watery and ſpirituous menſtrua; ſome more perfectly to one, and others to the other. None of the ſubſtances of this claſs give over any thing conſiderable of their taſte in diſtillation, either to water or to ſpirit; their bitterneſs remaining entire, and frequently improved, in the extracts. Such as are accompanied with flavour, as wormwood, may, by this proceſs, be reduced into ſimple flavourleſs bitters.

Theſe ſubſtances participate of the virtues of aſtringents and aromatics. Their general effects are, to conſtringe the fibres of the ſtomach and inteſtines, to warm the habit, attenuate the bile and juices in the firſt paſſages, and promote the natural evacuations, particularly of ſweat and urine. In weakneſs of the ſtomach, loſs of appetite, indigeſtion, and the like diſorders, proceeding from a laxity of the ſolids, or cold ſluggiſh indiſpoſition of the juices, theſe kinds of medicines do good ſervice. Where the fibres are already too tenſe and rigid, where there is any immoderate heat or inflammation, bitters very ſenſibly increaſe the diſtemper; and if their uſe be continued, communicate it to the kidneys: hence the urine becomes high coloured, ſmall in quantity, and, at length, ſuppreſſed; a dropſy ſoon ſucceeding. If the kidneys were before ſo lax, as to remain now uninjured, yet the other viſcera become gradually more and more rigid, and a tabes is at length brought on.

Bitter ſubſtances deſtroy inſects, and prevent putrefaction. Hence they are recommended as anthelmintic; and externally as antiſeptics.

EMETICS and CATHARTICS.

Hellebore,
Jalap,
Ipecacoanha,
Colocynth,
Scammony,
Gamboge, &c.

THESE ſubſtances conſiſt of a reſinous part, in which the purgative or emetic quality reſides; and a gummy ſaline one, which acts chiefly as a diuretic. The former is extracted or diſſolved by vinous ſpirits; the latter by water. Nothing ariſes in diſtillation from either.

The acrid reſins, exhibited by themſelves, tenaciouſly adhere to the coats of the inteſtines, by their ſtimulating power irritate and inflame them, and thus produce ſundry violent diſorders. Hoffman relates, that he has ſometimes obſerved convulſions, and a paralyſis of both ſides, from their uſe.

Theſe inconveniences may be avoided, by previouſly triturating them with ſubſtances capable of dividing their tenacious texture, and preventing their adheſion; by theſe means, they become mild and ſafe, operate without diſturbance, and, at the ſame time, more effectually anſwer the purpoſes intended by them.

Some have endeavoured to correct the ill quality of the reſinous purgatives, by the addition of acids and aromatic oils. Acids weaken their power, but have no other effect than what a diminution of the doſe would equally anſwer. The pungent eſſential oils may ſerve to warm the ſtomach, make the medicine ſit eaſier, and thus prevent the nauſea, which ſometimes happens; but as ſoon as the reſin begins to exert itſelf in the inteſtines, theſe oils, inſtead of correcting, increaſe its virulence; being themſelves apt to occaſion the inconveniences which they are here intended to prevent, an irritation and inflammation of the bowels. Alkaline ſalts or ſoaps have a better effect; as they diſpoſe the reſin to ſolution, and promote its operation.

The medicines of this claſs ſeem to act by liquefying the juices, and ſtimulating the coats of the ſtomach and inteſtines. If the irritation be ſtrong and ſudden, their action is quick and upwards: if ſlower, downwards. Cathartics, given in a liquid form, or in very ſenſible habits, often prove emetic; and emetics, where mucus abounds, cathartic. They operate more violently in robuſt conſtitutions than in thoſe of a contrary temperament; the veſſels being in the former more tenſe and rigid, and conſequently leſs capable of bearing an equal degree of irritation.

The action of theſe medicines is extended beyond the primæ viæ. This appears evident from the increaſe of the pulſe, which always accompanies their operation; and from the common obſervation of children's being purged by the milk, if the nurſes have taken a carthartic. Some of them, particularly helebore, are ſaid to purge, if only applied externally in iſſues. Purgatives, even of the more powerful kind, exhibited in ſuitable ſmall doſes, in conjunction with the milder aperients, may be introduced into the habit, ſo as to prove notable deobſtruents, diuretics, and diaphoretics, without acting ſenſibly by ſtool.

The foregoing obſervations are inſerted, not with any view to a method of ſimples, but to give a general idea of the virtues of ſuch medicinal ſubſtances as are poſſeſſed of the qualities which make the objects of the reſpective articles. I ſhall dwell no longer on general reflections, but proceed to an account of each of the ſimples ſeparately.

ABIETIS *lignum, ſummitates, coni: Abietis conis ſurſum ſpectantibus ſive maris C. B. Pini piceæ Lin. vel Abietis tenuiore folio fructu deorſum ſpectante*

tante Tourn. Pini abietis Lin. The ſilver and the red fir; their wood, tops, and cones.

Theſe are large ever-green trees, frequent in the northern climates. The firſt is ſaid to be found wild in ſome parts of England, and the ſecond on the hills of Scotland. From theſe trees, in different parts of Germany, the Straſburgh turpentine is extracted, of which hereafter. The wood, and the fruit or cones, gathered about the end of autumn, abound with reſinous matter, and yield, in diſtillation with water, an eſſential oil, not greatly different from that obtained by the ſame means from turpentine.—The wood and tops of the fir trees, on account of their reſinous juice, are ſometimes employed in decoctions and diet drinks, for promoting urine and ſweat, purifying the blood and juices, and cleanſing and healing internal ulcerations, particularly thoſe of the urinary paſſages. See the article TEREBINTHINA.

ABROTANI MARIS *folia: Abrotani maris anguſtifolii majoris C. B. Artemiſiæ abrotani Lin.* Southernwood; the leaves [*E.*]

This is a ſhrubby plant, clothed with very finely divided leaves, of a greyiſh green colour: the flowers, which are very ſmall and yellowiſh, hang downwards, ſeveral together, from the middle of the branches to the top. It is a native of the warmer countries; in this it is cultivated in gardens: the leaves fall off every winter: the roots and ſtalks abide many years.

Southernwood has a ſtrong, not very diſagreeable ſmell; and a nauſeous, pungent, bitter taſte; which is totally extracted by rectified ſpirit, leſs perfectly by watery liquors. It is recommended as an anthelmintic; and in cold leucophlegmatic habits, as a ſtimulant, detergent, aperient, and ſudorific. The preſent practice has almoſt entirely confined its uſe to external applications. The leaves are frequently employed in diſcutient and antiſeptic fomentations; and have been recommended alſo in lotions and unguents for cutaneous eruptions, and the falling off of the hair.

ABROTANI FEMINÆ *folia: Abrotani fœminæ foliis teritibus C. B. Santolinæ chamæcypariſſi Lin.* Lavendar-cotton; the leaves [*E.*]

This plant is all over white and hoary: the leaves are compoſed of ſmall knobs ſet in rows along a middle rib; the flowers ſtand upright on the tops of the ſtalks. It is raiſed in gardens, flowers in June and July, and holds its leaves all the winter.

The *abrotanum fœmina* is ſuppoſed to poſſeſs the ſame virtues with the *mas*; but in a leſs degree. For external purpoſes, the medical difference betwixt them is not very great: hence, in fomentations (which is the principal intention they are uſually applied to) the London College allows either to be taken inſtead of the other.——The *abrotanum fœmina* is recommended by ſome in hyſteric and other female complaints: it has been cuſtomary among the common people to uſe a decoction of it in milk againſt worms.

ABSINTHII VULGARIS *folia: Abſinthii vulgaris majoris J. B. Artemiſiæ abſinthii Lin.* Common wormwood; the leaves [*L. E.*]

The leaves of this ſort of wormwood are divided into roundiſh ſegments, of a dull green colour above, and whitiſh underneath. It grows wild in ſeveral parts of England; about London large quantities are cultivated for medicinal uſe: it flowers in June and July; and, after having ripened its ſeeds, dies down to the ground, except a tuft of the lower leaves, which generally abides the winter.

Wormwood is a ſtrong bitter: and was formerly much uſed as ſuch, againſt weakneſs of the ſtomach, and the like, in medicated wines and ales. At preſent it is rarely employed in theſe intentions, on account of the ill reliſh and offenſive ſmell with which it is accompanied. From theſe it may be in part freed by keeping, and totally by long coction, the bitter remaining entire. An extract, made by boiling the leaves in a large quantity of water, and evaporating the liquor with a ſtrong fire, proves a bitter ſufficiently grateful, without any diſguſtful flavour.—An oil diſtilled from this plant [*L. E.*] and an extract [*E.*] are kept in the ſhops.

ABSINTHII MARITIMI *ſummitates: Abſinthii marini albi Gerard. Artemiſiæ maritimæ Lin.* Sea wormwood, commonly, but falſely, called Roman wormwood; the tops [*L.*]

The leaves of ſea wormwood are much ſmaller than thoſe of the common, and hoary on the upper ſide, as well as the lower; the ſtalks alſo are hoary all over. It grows wild about our ſalt marſhes, and in ſeveral parts near the ſea coaſts.—In taſte and ſmell, it is weaker and leſs unpleaſant than the common wormwood. The virtues of both are ſuppoſed to be of the ſame kind, and to differ only in degree.

The tops enter three of our diſtilled waters, and give name to a conſerve [*L.*] They are an ingredient alſo in the common fomentation and green oil [*L.*]

ABSINTHII ROMANI *folia: Abſinthii pontici tenuifolii incani C. B. Artemiſiæ ponticæ Lin.* Roman wormwood; the leaves and tops [*E.*]

This ſpecies is very different in appearance from the two foregoing: it is in all its parts ſmaller than either; the leaves are divided into fine filaments, and hoary on the lower ſide; the ſtalks, either entirely or in part, of a purpliſh hue. It is a native of the warmer countries, and, at preſent, difficultly procurable in this, though as hardy and as eaſily raiſed as any of the other ſorts. Sea wormwood has long ſupplied its place in the markets, and been in general miſtaken for it.

Roman wormwood is leſs ungrateful than either of the others: its ſmell is tolerably pleaſant: the taſte, though manifeſtly bitter, ſcarce diſagreeable. It appears to be the moſt eligible of the three as a ſtomachic; and is likewiſe recommended by ſome in dropſies.

ACACIA [*L. E.*]: the inſpiſſated juice of the unripe fruit of a large prickly tree, called by Caſper Bauhine, *Acacia foliis ſcorpioidis leguminoſæ. Mimoſa nilotica Lin.*

This juice is brought to us from Egypt, in roundiſh maſſes, wrapt up in thin bladders. It is outwardly of a deep brown colour, inclining to black; inwardly of a reddiſh or yellowiſh brown; of a firm conſiſtence, but not very dry. It ſoon ſoftens in the mouth, and diſcovers a rough, not diſagreeable taſte, which is followed by a ſweetiſh reliſh. This inſpiſſated juice entirely diſſolves in watery liquors; but is ſcarce ſenſibly acted on by rectified ſpirit.

Acacia is a mild aſtringent medicine. The Egyptians give it in ſpitting of blood, in the quantity of a dram, diſſolved in any convenient liquor; and repeat this doſe occaſionally: they likewiſe employ it in collyria for ſtrengthening the eyes, and in gargariſms for quinſeys. Among us, it is little otherwiſe uſed than as an ingredient in mithridate and theriaca [*L.*], and is rarely met with in the ſhops. What is uſually ſold for the Egyptian acacia, is the inſpiſſated juice of unripe ſloes: this is harder, heavier, of a darker colour, and ſomewhat ſharper taſte, than the true ſort.

ACANTHI *folia: Acanthi ſativi vel mollis Virgilii C. B.* Brankurſine; the leaves.

This is a beautiful plant, growing naturally in Italy, and other warm climates: from its leaves, the ancients are ſaid to have taken the idea of their moſt beautiful order of architecture. All the parts of it have a ſoft ſweetiſh taſte, and abound with a mucilaginous juice: its virtues do not ſeem to differ from thoſe of althæa and other mucilaginous plants.

ACETOSÆ *vulgaris, ſive oxalidis, folia & radix: Acetoſæ arvenſis C. B. Oxalidis vulgaris folio longo J. B. Rumicis acetoſæ Lin.* Common ſorrel; the roots and leaves [*E.*]

Sorrel grows wild in fields and meadows throughout England. The leaves have a reſtringent acid taſte, without any ſmell or particular flavour. Their medical effects are, to cool, quench thirſt, and promote the urinary diſcharge: a decoction of them in whey affords an uſeful and agreeable drink in febrile or inflammatory diſorders: and is recommended by Boerhaave to be uſed in the ſpring as one of the moſt efficacious aperients and detergents. Some kinds of ſcurvies have yielded to the continued uſe of this medicine: the Greenlanders, who are very ſubject to this diſtemper, are ſaid to employ, with good ſucceſs, a mixture of the juices of ſorrel and ſcurvygraſs. The only officinal preparation of this plant, is an eſſential ſalt from the juice of the leaves [*E.*]

The roots of ſorrel have a bitteriſh auſtere taſte, without any acidity: they are ſaid to be deobſtruent and diuretic; and have ſometimes had a place in aperient apozems, to which they impart a reddiſh colour.

The ſeeds of this plant were formerly uſed in diarrhœas and dyſenteries, but have long been ſtrangers to the ſhops, and are now juſtly expunged both from the London and Edinburgh pharmacopœias: they have no remarkable ſmell, and ſcarcely any taſte.

ACETOSELLA [*E.*] vide LUJULA.

ACETUM [*L. E.*] Vinegar: an acid produced from fermented vinous liquors by a ſecond fermentation. See page 6.

Wine vinegar is conſiderably purer than that prepared from malt liquors; the latter, however acid and fine, contains a large portion of a viſcous mucilaginous ſubſtance; as is evident from the ropyneſs and ſlimyneſs to which this kind of vinegar is very much ſubject; the ſtronger and more ſpirituous the wine, the better and ſtronger vinegar it yields. The French vinegars are ſaid by Geoffroy to ſaturate above one-thirty-fifth of their weight of fixt alkaline ſalt, and ſome of them no leſs than one-twelfth; the beſt of the German vinegars little more than one-fortieth.

Vinegar is a medicine of excellent uſe in all kinds of inflammatory and putrid diſorders, either internal or external: in ardent, bilious fevers, peſtilential, and other malignant diſtempers, it is recommended by Boerhaave as one of the moſt certain ſudorifics. (See the ſection of acids, page 61.) Weakneſs, fainting, vomiting, hyſterical, and hypochondriacal, complaints, have been frequently relieved by vinegar applied to the mouth and noſe, or received into the ſtomach.

ACONITUM [*E.*] *Aconitum (Napellus) Lin.* Blue Wolfſbane.

This is a perennial plant, having many ſtalks ariſing from one root, alternate petiolated leaves divided into five parts, each portion cut into linear ſegments; and terminal bunches of irregular blue flowers with five petals, many ſtamina, and three piſtils, ſucceeded by three capſules containing ſeeds. It is a native of various parts of Europe and Virginia.

Blue wolfſbane when firſt gathered has a ſtrong ſmell, but no peculiar taſte; and has long been known to be one of the moſt virulent of the vegetable poiſons It occaſions giddineſs, convulſions, violent purgings both upwards and downwards, faintings, cold ſweats, and even death itſelf. Dr. Stœrck was the firſt who ventured to introduce it into medicine. He found that the extract, given in doſes of ten, twenty, and even thirty grains, excited a ſweat without inconvenience; and by perſiſting in the uſe of it, great relief was obtained in fixed rheumatic and arthritic pains, ſcirrous tumours, venereal nodes, anchyloſes, amauroſis, and other ſimilar complaints. Other practitioners have experienced the ſame good effects in ſome degree, and the Edinburgh college has received the extract as an officinal.

ACORUS, vide CALAMUS AROMATICUS.

ADIANTHI VERI *ſeu capilli Veneris folia: Adianthi folio coriandri C. B.* True maidenhair; the leaves.

This is a low evergreen herb, and one of thoſe which, from the ſlenderneſs of their ſtalk, are called capillary. It is a native of Italy, and the ſouthern parts of France; whence the leaves are ſometimes brought to us. Theſe have an agreeable, but very weak, ſmell; and a mucilaginous ſomewhat roughiſh taſte, which they readily impart to boiling water.

Maidenhair has been greatly celebrated in diſorders of the breaſt, proceeding from a thinneſs and acrimony of the juices; and likewiſe for opening obſtructions of the viſcera, and promoting the expectoration of tough phlegm. But modern practice pays little regard to it; nor is it often to be met with in the ſhops; the TRICHOMANES, or *Engliſh maidenhair*, which is of the ſame quality, generally ſupplying its place.

AERUGO [*L. E.*] Verdegris, This is a preparation of copper, made chiefly at Montpellier in France, by ſtratifying copper plates with grape ſtalks that have been impregnated with a fermented vegetable acid. In a few days, the plates are found covered with a pale green downy matter, which is ſcraped off from the copper, and the proceſs again repeated.

Verdegris, as it comes to us, is generally mingled with ſtalks of the grape; theſe may be ſeparated, in pulverization, by diſcontinuing the operation, as ſoon as what remains ſeems to be almoſt entirely compoſed of them.

Verdegris is rarely or never uſed internally. Some writers greatly extol it as an emetic, and ſay, that a grain or two being taken, it acts as ſoon as received into the ſtomach; but its uſe has been too often followed by dangerous conſequences. (See the article CUPRUM.)—Verdegris applied externally, proves a gentle detergent and eſcharotic, and ſerves to take down fungous fleſh ariſing in wounds. In theſe intentions, it is an ingredient in the *mel ægyptiacum, unguentum baſilicum viride* [*L.*] and *balſamum viride* [*E.*]

AGALLOCHUM *ſeu lignum aloes.* Aloes wood.

There have been different conjectures concerning this wood, but no ſatisfactory account of it has hitherto appeared. Authors diſtinguiſh ſeveral ſorts of agallochum, moſt of which are ſtrangers to Europe. That which comes to us is in little hard ponderous pieces, of a yellowiſh-brown colour, with ſeveral black or purpliſh veins. It has a bitteriſh aromatic taſte: and a fragrant ſmell, eſpecially if reduced to powder, or ſet on fire. Diſtilled with water, it affords a very fragrant eſſential oil, but in ſmall quantity: digeſted in rectified ſpirit, it yields an elegant tincture, which loſes nothing valuable in being avaporated to the conſiſtence of an extract.

Agallochum is at preſent of very little uſe in medicine, and rarely to be met with in the ſhops. If it could be eaſily procured, at leaſt the better ſort of it bids fair to be a very uſeful cordial. Hoffman greatly recommends, in this intention, the diſtilled oil and ſpirituous tincture; and eſteems a mixture of this latter with tincture of ſteel an excellent corroborant.

AGARICUS: *Agaricus ſive fungus laricis C. B.* Agaric; a fungus growing on old larch trees [*L. E.*]

This fungus is an irregular ſpongy ſubſtance, extremely light, and of an uniform ſnowy whiteneſs (except the cortical part, which is uſually taken off before the agaric is brought into the ſhops). It cuts freely with a knife, without diſcovering any hardneſs or gritineſs, and readily crumbles betwixt the fingers into a powder. It has no remarkable ſmell; its taſte is at firſt ſweetiſh, but on chewing for a little while, proves acrid, bitter, and nauſeous.

Agaric was formerly in great eſteem as a cathartic, but the preſent practice has almoſt entirely rejected its uſe. It operates exceeding ſlowly, inſomuch that ſome have denied it to have any purgative virtue at all. Given in ſubſtance, it almoſt always occaſions a nauſea, not unfrequently vomiting, and ſometimes exceſſive tormina of the bowels; theſe effects are attributed to its light farinaceous matter adhering to the coats of the inteſtines, and producing a conſtant irritation. The beſt preparation of agaric ſeems to be an extract made with water, in which fixt alkaline ſalt has been diſſolved; or with vinegar or wine; the firſt is ſaid by Boulduc, and the other two by Neumann, to prove effectual and ſafe purgatives. Nevertheleſs, this is at beſt a precarious medicine, of which we ſtand in no manner of need; hence the college have juſtly rejected it from all the compoſitions in which it formerly had a place, except the mithridate and theriaca [*L.*]

AGARICUS *pedis equini facie Tourn. Boletus igniarius Lin.* Female agaric, or agaric of the oak, called, from its being very eaſily inflammable, touchwood, or ſpunk.

This fungus is frequently met with, on different kinds of trees, in England; and is ſaid to have been ſometimes brought into the ſhops mixt with the true agaric of the larch. From this it is eaſily diſtinguiſhable by its greater weight, duſky colour, and mucilaginous taſte, void of bitterneſs. The medullary part of this fungus, beaten ſoft, and applied externally, has been greatly celebrated as a ſtyptic, and ſaid to reſtrain not only venal but arterial hæmorrhages, without the uſe of ligatures. It does not appear, however, to have any real ſtyptic power, or to act any otherwiſe than dry lint, ſponge, or other ſoft fungous applications.

AGERATI *folia et flores: Agerati foliis ſerratis C. B. Patermicæ luteæ ſuaveolentis Tourn. Achillææ agerati Lin.* Maudlin; the leaves and flowers.

This is a ſlender plant, clothed all over with narrow ſerrated leaves. It is a native of Italy and other warm countries; with us, it is raiſed in gardens, and flowers in July and Auguſt.

Maudlin has a light agreeable ſmell; and a roughiſh, ſomewhat warm and bitteriſh taſte. Theſe qualities point out its uſe as a mild corroborant; but it has long been a ſtranger to practice, and is now omitted both by the London and Edinburgh colleges.

AGNI CASTI *ſemen: Agnis folio non ſerrato J. B. Viticis Agni Caſti Lin.* The chaſte tree; its ſeeds.

This is a ſmall tree, or rather ſhrub, growing ſpontaneouſly in Italy, &c. and raiſed with us in gardens. Its fruit, which is about the ſize of a pepper corn, contains four longiſh ſeeds, which are ſaid to be of an aromatic ſmell, and an acrid bitteriſh taſte, but which are found on examination to be almoſt inodorous and inſipid. Theſe ſeeds have been celebrated as antiphrodiſiacs; but experience does not warrant their having any ſuch virtues

AGRIMONIÆ *folia: Eupatorii veterum ſeu agrimoniæ C. B.* Agrimony; the leaves [*E.*]

This is a common plant in hedges, and the borders of fields. The leaves have an herbaceous, ſomewhat acrid, roughiſh taſte, accompanied with an aromatic flavour. Agrimony is ſaid to be aperient, detergent, and to ſtrengthen the tone of the viſcera: hence it is recommended in ſcorbutic diſorders, in debility and laxity of the inteſtines, &c. Digeſted in whey, it affords an uſeful diet-drink for the ſpring ſeaſon, not ungrateful to the palate or ſtomach.

ALCANNA, vide ANCHUSA.

ALCEÆ *folia: Alceæ vulgaris majoris C. B. Malvæ verbenacæ Ger.* Vervain mallow; the leaves.

This is eaſily diſtinguiſhable from the common and marſhmallow,

low, by its leaves being jagged or cut in about the edges. It grows in hedges, and flowers greateſt part of the ſummer. *Alcea* agrees in quality with the ALTHÆA and MALVA VULGARIS; but appears to be leſs mucilaginous than either.

ALCHIMILLÆ *folia*: *Alchimillæ vulgaris C. B.* Ladies mantle; the leaves [*E.*]

This grows wild in many parts of England, but is rarely met with about London. The leaves ſeem as if plaited or folded together, ſo as to have given occaſion to the Engliſh name of the plant. The leaves of alchimilla diſcover to the taſte a moderate aſtringency, and were formerly much eſteemed in ſome female weakneſſes, and in fluxes of the belly. They are now rarely made uſe of; though both the leaves and roots might, doubtleſs, be of ſervice in caſes where mild aſtringents are required.

ALCIS UNGULA: Elks hoof.

The elk is a large animal of the ſtag kind, met with in Muſcovy, and other cold countries. The hoof of one of the hinder feet has been celebrated againſt epilepſies, from a ridiculous opinion, that the elk is himſelf ſubject to diſorders of this kind, and prevents or removes them by ſcratching his ear with his hoof.

ALKEKENGI *ſeu halicacabi fructus*: *Solani veſicarii C. B. Alkekengi Phyſalis Lin.* Winter cherry: the fruit [*E.*]

This is a low, branched ſhrub, bearing leaves like thoſe of nightſhade; with white flowers, which ſtand ſingle at the joints. The flower cup changes into a membranous cover, which at length burſts and diſcovers a fruit of a fine red colour, about the ſize of a common cherry. The fruit ripens in October, and continues frequently to the middle of December. This plant grows wild in ſome parts of France, Germany, &c. The beauty and lateneſs of its fruit have gained it a place in our gardens.

Winter cherries are ſaid by moſt writers to be extremely bitter: but, as Haller juſtly obſerves, the cherry itſelf, if carefully freed from the cover (which is very bitter and pungent), has merely a ſubacid taſte. They ſtand highly recommended as detergent, aperient, diuretic, and for expelling gravel: four, five, or more of the cherries are directed for a doſe, or an ounce of the expreſſed juice. Mr. Ray tells us of a gouty perſon who was cured and kept free from returns of his diſorder, by taking eight of theſe cherries at each change of the moon; theſe occaſioned a copious diſcharge of extremely fœtid urine.

ALLIARIÆ *folia*: *Heſperidis allium redolentis Tourn. Eryſimi alliariæ Lin.* Sauce alone, or jack by the hedge; the leaves [*E.*]

This is common in hedges and ſhady waſte places, flowering in May and June. The leaves have a bitteriſh acrid taſte, and, when rubbed betwixt the fingers, a ſtrong ſmell, approaching to that of garlick. They are recommended internally as ſudorifics and deobſtruents, ſomewhat of the nature of garlick, but much milder; and externally as antiſeptics in gangrenes and cancerous ulcers. Hildanus uſed to gather the herb for theſe laſt purpoſes in the ſpring, and expoſe it for a day to the action of a dry air in a ſhady place; being then committed to the preſs, it yielded a juice poſſeſſing the ſmell and taſte of the alliaria: this, he informs us, with a little oil on the ſurface, keeps in perfection for years; whereas the herb in ſubſtance ſoon loſes its vitue in keeping.

ALLIUM: *radix Allii ſativi C. B.* Garlick; the roots [*L. E.*]

Theſe roots are of the bulbous kind, of an irregularly roundiſh ſhape, with ſeveral fibres at the bottom: each root is compoſed of a number of leſſer bulbs, called cloves of garlick, incloſed in one common membranous coat, and eaſily ſeparable from one another. All the parts of this plant, but more eſpecially the roots, have a ſtrong offenſive ſmell, and an acrimonious almoſt cauſtic taſte. The root applied to the ſkin inflames, and often exulcerates the part. Its ſmell is extremely penetrating and diffuſive; when the root is applied to the feet, its ſcent is ſoon diſcoverable in the breath; and when taken internally, its ſmell is communicated to the urine, or the matter of an iſſue, and perſpires through the pores of the ſkin.

This pungent root warms and ſtimulates the ſolids, and attenuates tenacious juices. Hence, in cold leucophlegmatic habits, it proves a powerful expectorant, diuretic, and emmenagogue; and if the patient be kept warm, a ſudorific. In humoural aſthmas, and catarrhous diſorders of the breaſt, in ſome ſcurvies, flatulent colics, hyſterical and other diſeaſes proceeding from laxity of the ſolids, and cold ſluggiſh indiſpoſition of the fluids, it has generally good effects: it has likewiſe been found ſerviceable in ſome hydropic caſes. Sydenham relates, that he has known the dropſy cured by the uſe of garlick alone; he recommends it chiefly as a warm ſtrengthening medicine in the beginning of the diſeaſe.

The liberal uſe of garlick is apt to occaſion headachs, flatulencies, thirſt, febrile heats, inflammatory diſtempers, and ſometimes diſcharges of blood from the hæmorrhoidal veſſels. In hot bilious conſtitutions, where there is already a degree of irritation, where the juices are too thin and acrimonious, or the viſcera unſound; this ſtimulating medicine is manifeſtly improper, and never fails to aggravate the diſtemper.

The moſt commodious form for the taking of garlick, a medicine to moſt people not a little unpleaſant, is that of a bolus or pill. Infuſions in ſpirit, wine, vinegar, and water, although containing the whole of its virtues, are ſo acrimonious, as to be unfit for general uſe. A ſyrup and oxymel of it are kept in the ſhops.

Garlick made into an unguent with oils, &c. and applied externally, is ſaid to reſolve and diſcuſs cold tumours, and has been by ſome greatly eſteemed in cutaneous diſeaſes. It has likewiſe ſometimes been employed as a revellent. Sydenham aſſures us, that among all the ſubſtances which occaſion a derivation or revulſion from the head, none operate more powerfully than garlick applied to the ſoles of the feet: hence he was led to make uſe of it in the confluent ſmall pox: about the eighth day after the face began to ſwell; the root cut in pieces, and tied in a linen cloth, was applied to the ſoles, and renewed once a day till all danger was over.

ALNI VULGARIS *folia & cortex: Alni rotundifoliæ glutinoſæ viridis C. B. Betulæ Alni Lin.* The leaves and bark of the alder tree.

Theſe have a bitter ſtyptic diſagreeable taſte. The bark is recommended by ſome in intermittent fevers; and a decoction of it, in gargariſms, for inflammations of the tonſils.

ALNI NIGRÆ *ſeu frangulæ cortex: Alni nigræ bacciferæ J. B.* The black or berry-bearing alder; its bark [*E.*)

This tree is common in moſt woods in divers parts of England. The internal bark of the trunk or root of the tree, given to the quantity of a dram, purges violently, occaſioning gripes, nauſeæ, and vomiting. Theſe may be, in good meaſure, prevented by the addition of aromatics; but, as we have plenty of ſafer and leſs precarious purgatives, practitioners have deſervedly rejected this.

ALOE. Aloe is the inſpiſſated juice of certain plants of the ſame name. The ancients diſtinguiſhed two ſorts of aloes; the one was pure and of a yellowiſh colour, inclining to a red, reſembling the colour of a liver, and, thence, named hepatic; the other was full of impurities, and, hence, ſuppoſed to be only the droſs of the better kind. At preſent, various ſorts are met with in the ſhops; which are diſtinguiſhed either from the places, from the ſpecies of the plants, or from ſome differences in the juices themſelves. Theſe may be all ranged in three claſſes;

(1) ALOE SOCOTORINA [*L. E.*] Socotorine aloes, brought from the iſland Socotora in the Indian ocean, wrapt in ſkins; it is obtained from the *aloe Succotorina anguſtifolia ſpinoſa, flore purpureo Breyn.* & *Commelin. Varietas aloes perfoliatæ Lin.*—This ſort is the pureſt of the three; it is of a gloſſy ſurface, clear, and in ſome degree pellucid; in the lump, of a yellowiſh red colour, with a purple caſt; when reduced to powder, of a bright golden colour. It is hard and friable in the winter, ſomewhat pliable in ſummer, and grows ſoft betwixt the fingers. Its taſte is bitter, accompanied with an aromatic flavour, but inſufficient to prevent its being diſagreeable; the ſmell is not very unpleaſant, and ſomewhat reſembles that of myrrh.

(2) ALOE HEPATICA [*E.*] Hepatic, Barbadoes, or common aloes; the juice of the *Aloe C. B. aloe vera vulgaris Munting.*—Hepatic aloes is not ſo clear and bright as the foregoing ſort: it is alſo of a darker colour, more compact texture, and for the moſt part drier. Its ſmell is much ſtronger and more diſagreeable: the taſte intenſely bitter and nauſeous, with little or nothing of the fine aromatic flavour of the Socotorine.—The beſt hepatic aloes comes from Barbadoes, in large gourd ſhells; an inferior ſort of it (which is generally ſoft and clammy) is brought over in caſks.

(3) ALOE CABALLINA. Fetid, caballine, or horſe aloes; the produce of the *aloe Guineenſis caballina vulgari ſimilis ſed tota maculata Commelin.*—This ſort is eaſily diſtinguiſhed from both the foregoing, by its ſtrong rank ſmell; although, in other reſpects, it agrees pretty much with the hepatic, and is not unfrequently ſold in its ſtead. Sometimes the caballine aloes is prepared ſo pure and bright, as not to be diſtinguiſhable by the eye even from the Socotorine; but its offenſive ſmell, of which it cannot be diveſted, readily betrays it.

All the ſorts of aloes diſſolve in pure ſpirit, proof ſpirit, and proof ſpirit diluted with half its weight of water; the impurities only being left. They diſſolve alſo by the aſſiſtance of heat in water alone; but, as the liquor grows cold, the reſinous part ſubſides, the gummy remaining united with the water. The hepatic aloes is found to contain more reſin, and leſs gum than the Socotorine, and this than the caballine. The reſins of all the ſorts, purified by ſpirit of wine, have little ſmell; that obtained from the Socotorine has ſcarce any perceptible taſte; that from the hepatic, a ſlight bitteriſh reliſh, and the reſin of the caballine, a little more of the aloetic flavour. The gummy extracts of all the ſorts are leſs diſagreeable than the crude aloes: the extract of Socotorine aloes has very little ſmell, and is in taſte not unpleaſant; that of the hepatic has a ſomewhat ſtronger ſmell, but is rather more agreeable in taſte than the extract of the Socotorine: the gum of the caballine retains a conſiderable ſhare of the peculiar rank ſmell of this ſort of aloes, but its taſte is not much more unpleaſant than that of the extracts made from the two other ſorts.

Aloes is a ſtimulating cathartic bitter: if given in ſo large a doſe as to purge effectually, it often occaſions an irritation about the anus, and ſometimes a diſcharge of blood. Small doſes of it frequently repeated, not only cleanſe the primæ viæ, but likewiſe attenuate and diſſolve viſcid juices in the remoter parts, warm the habit, quicken the circulation, and promote the uterine and hæmorrhoidal fluxes. This medicine is particularly ſerviceable to perſons of a phlegmatic temperament and ſedentary life, and where the ſtomach is oppreſſed and weakened: in dry bilious habits, aloes prove injurious, immoderately heating the blood, and inflaming the bowels.

The juice is likewiſe, on account of its bitterneſs, ſuppoſed to kill worms, either taken internally, or applied in plaſter to the umbilical region. It is alſo celebrated for reſtraining external hæmorrhages, and cleanſing and healing wounds and ulcers.

The ancients gave aloes in much larger doſes than is cuſtomary at preſent. Dioſcorides orders half a dram or a dram for gently looſening the belly; and three drams when intended to have the full effect of a cathartic. But modern practice rarely exceeds a ſcruple, and limits the greateſt doſe to two ſcruples. For the common purpoſes of this medicine, ten or twelve grains ſuffice: taken in theſe or leſs quantities, it acts as a gentle ſtimulating eccoprotic, capable of removing, if duly continued, very obſtinate obſtructions.

Some are of opinion, that the purgative virtue of aloes reſides entirely in its reſin; but experience has ſhewn, that the pure reſin has little or no purgative quality; and that the gummy part ſeparated from the reſinous, acts more powerfully than crude aloes. If the aloes, indeed, be made to undergo long coction in the preparation of the gummy extract, its cathartic power will be conſiderably leſſened, not from the ſeparation of the reſin, but from an alteration made in the juice itſelf by the heat. The ſtrongeſt vegetable cathartics become mild by a like treatment, without any remarkable ſeparation of their parts.

Socotorine aloes, as already obſerved, contains more gummy matter than the hepatic; and hence it is likewiſe found to purge more, and with greater irritation. The former ſort, therefore, is moſt proper where a ſtimulus is required, as for promoting or exciting the menſtrual flux; while the latter is better calculated to act as a common purge. It is ſuppoſed that the vulnerary and balſamic virtues of this juice reſide chiefly in the reſin; and hence that the hepatic aloes, which is moſt reſinous, is moſt ſerviceable in external appilcation.

The Edinburgh college directs the hepatic aloes in the *balſamum traumaticum* and *tinctura myrrhæ et aloes*, deſigned for external uſe; and the Socotorine in thoſe preparations or compoſitions which are to be taken internally, as the *tinctura ſacra, elixir ſacrum, pulvis hieræ picræ, pilulæ aloeticæ, pilulæ Rufi, pilulæ ſtomachicæ, pilulæ cocciæ*, &c.

The London college uſes the Socotorine only. In the *vinum aloeticum, tinctura ſacra, elixir aloes, balſamum traumaticum, pilulæ aromaticæ*, and the other pills wherein aloes is an ingredient, the Socotorine kind in ſubſtance is directed. In the powder of *hiera picra*, only the pure gummy part of the Socotorine aloes is employed, the ſeparation of which from the reſinous matter is given in a diſtinct proceſs.

ALSINES *folia: Alſines vulgaris ſive morſus gallinæ J. B. Alſines mediæ Lin.* Chickweed; the leaves [*E.*]

This plant was employed by the ancients externally againſt eryſipelatous and other inflammatory diſorders. Later times have given it internally in hæmoptoes, as a reſtorative in atrophies and conſumptions, and likewiſe as an antepileptic. Some recommend for theſe purpoſes the expreſſed juice, to be taken to the quantity of an ounce; others the dried leaves, in the doſe of a dram; and others, a water diſtilled from them. But if any real benefit be expected from *alſine*, it ought to be uſed liberally as food; though even then, its effects would not perhaps be ſuperior to thoſe of more approved culinary herbs.

ALTHÆÆ *folia, radix: Althææ Dioſcoridis & Plinii C. B. Althææ officinalis Lin.* Marſh-mallows; the leaves and root [*L. E.*]

This plant grows wild in marſhes, and other moiſt places, in ſeveral parts of England; though frequently cultivated for medicinal uſe in gardens. All the parts of it have a ſlimy taſte, and abound with a ſoft mucilaginous ſubſtance, which is readily extracted by water: the mucilage of the roots appears to be the ſtrongeſt, and, hence, this part is generally made uſe of in preference to the others.

This plant has the general virtues of an emollient medicine; and proves ſerviceable in a thin acrimonious ſtate of the juices, and where the natural mucus of the inteſtines is abraded. It is chiefly recommended in ſharp defluxions upon the lungs, hoarſeneſſes, dyſenteries, and likewiſe in nephritic and calculous complaints; not, as ſome have ſuppoſed, that this medicine has any peculiar power of diſſolving or expelling the calculus; but as, by lubricating and relaxing the veſſels, it procures a more free and eaſy paſſage. Althæa root is ſometimes employed externally for ſoftening and maturating hard tumors: chewed, it is ſaid to give eaſe in difficult dentition of children.

This root gives name to an officinal *ſyrup* [*L. E.*] and *ointment* [*L.*] and is likewiſe an ingredient in the *compound powder of gum tragacanth* [*L. E.*] and the *oil* and *plaſter of mucilages* [*L.*] though it does not appear to communicate any particular virtue to theſe two, its mucilaginous matter not being diſſoluble in oils.

ALUMEN [*L. E.*] Alum.

Alum is a ſalt artificially produced from certain minerals, by calcining and expoſing them to the air; after which the alum is elixated by means of water. The largeſt quantities are prepared in England, Germany, and Italy.

This ſalt is of a white or pale red colour, of an auſtere ſtyptic taſte, accompanied with a nauſeous ſweetiſhneſs. It diſſolves in about twelve times its weight of water; and concretes again, upon duly evaporating the ſolution, into ſemitranſparent cryſtals of an octagonal figure. Expoſed to the fire, it eaſily melts, bubbles up in bliſters, emits a copious phlegm, and then turns into a light ſpongy white maſs, conſiderably more acrid than the alum was at firſt: this urged with a ſtronger fire, yields a ſmall quantity of acid ſpirit, ſimilar to that obtained by the ſame means from vitriol; the part which remains, if the heat have been ſufficiently intenſe and long continued, is an inſipid white earth, readily ſoluble in every kind of acid.

Solutions of alum coagulate milk, change the blue colour of vegetable juices into a red or purple, and turn an infuſion of galls turbid and whitiſh. Upon adding fixt alkaline ſalts to theſe ſolutions, the earth of the alum is precipitated, its acid uniting with the alkali into a neutral ſaline concrete ſimilar to vitriolated tartar.

Alum is a powerful aſtringent: it is reckoned particularly ſerviceable for reſtraining hæmorrhages, and immoderate ſecretions from the blood; but leſs proper in inteſtinal fluxes. In violent hæmorrhages, it may be given in doſes of fifteen or twenty grains, and repeated every hour or half hour till the bleeding abates: in other caſes, ſmaller doſes are more adviſeable; large ones being apt to nauſeate the ſtomach, and occaſion violent conſtipations of the bowels. It is uſed alſo externally, in aſtringent and repellent lotions and collyria.

Its officinal prepartions are, for internal uſe, the *ſerum aluminoſum* [*L.*] and *pulvis ſtypticus* [*E.*] for external applications, the *aqua aluminoſa, coagulum aluminoſum,* and *alumen uſtum* [*L.*] which laſt is no other than the alum dried by fire, or freed from the watery moiſture, which, like other ſalts, it always retains in its cryſtalline form. By this loſs of its water it becomes ſharper, ſo as to act as a ſlight eſcharotic. It is employed alſo as an ingredient in the *lapis medicamentoſus,* and the *aqua vitriolica* [*L.*]

AMARACUS, vide MAJORANA.

AMBRAGRISEA [*E.*]

Ambergris is a bituminous ſubſtance, of a greyiſh or aſh colour, intermingled with yellowiſh and blackiſh ſpecks or veins: it is uſually met with in little opake rugged maſſes, very light, of a looſe texture, friable in a certain degree like wax; they break rough and uneven, and not unfrequently contain pieces of ſhells, bones of fiſhes, and other like matters. This concrete is found floating on the ſurface of the ſea, or thrown out upon the ſhores; the greateſt quantities are met with in the Indian ocean; pieces have likewiſe been now and then diſcovered in our own and other northern ſeas.

Pure ambergris ſoftens betwixt the fingers; melts in a ſmall degree of heat into the appearance of oil, and in a ſtronger heat proves almoſt totally volatile. Warmed a little, it emits a peculiar fragrant ſmell; ſet on fire, it ſmells like burning amber. It diſſolves, though difficultly, in ſpirit of wine, and eſſential oils; but not in expreſſed oils or in water.

Ambergris is in general the moſt agreeable of the perfumes, and rarely accompanied with the inconveniencies which other ſubſtances of this claſs frequently occaſion. It is looked upon as an high cordial, and eſteemed of great ſervice in all diſorders of the head, and in nervous complaints. A ſolution of it in a ſpirit diſtilled from roſes, ſtands recommended by Hoffman as one of the moſt efficacious corroborants of the nervous ſyſtem. The Orientals entertain an high opinion of the aphrodiſiac virtues of this concrete; and likewiſe ſuppoſe that the frequent uſe of it conduces to long life.

AMMEOS VERI *ſemen: Ammeos odore origani J. B. Siſonis Ammeos Lin.* The ſeeds of the true ammi or biſhopſweed, brought from Egypt [*E.*]

Theſe are ſmall ſtriated ſeeds, of a reddiſh brown colour, a warm pungent taſte, and a pleaſant ſmell approaching to that of origanum. They are recommended as ſtomachic, carminative, and diuretic; but have long been ſtrangers to the ſhops. Their place has been generally ſupplied by the ſeeds of a plant common in our own country, though not a native of it, viz.

AMMEOS VULGARIS *ſemen: Ammeos vulgaris majoris, latioribus foliis, ſemine minus odorato J. B.* Common biſhopſweed ſeeds [*L.*]

The ſeeds of common biſhopſweed are ſomewhat larger and paler coloured than the foregoing: their ſmell and taſte is weaker, and without any thing of the origanum flavour of the true ammi. They are ranked among the four leſſer hot ſeeds, but are ſcarce otherwiſe made uſe of than as an ingredient in the theriaca. The Edinburgh college has dropped them, and retained only the foregoing ſort.

AMMONIACUM GUMMI [*L. E.*] Ammoniacum is a concrete gummy reſinous juice, brought from the Eaſt-Indies, uſually in large maſſes, compoſed of little lumps or tears, of a milky colour, but ſoon changing, upon being expoſed to the air, of a yellowiſh hue. We have no certain account of the plant which affords this juice. The ſeeds uſually found among the tears reſemble thoſe of the umbelliferous claſs. Such tears as are large, dry, free from little ſtones, ſeeds, or other impurities, ſhould be picked out and preferred for internal uſe; the coarſer kind is purified by ſolution and colature, and then carefully inſpiſſating it; unleſs this be artfully managed, the gum will loſe a conſiderable deal of its more volatile parts. There is often vended in the ſhops, under the name of ſtrained gum ammoniacum, a compoſition of ingredients much inferior in virtue.

Ammoniacum has a nauſeous ſweet taſte, followed by a bitter one; and a peculiar ſmell ſomewhat like that of galbanum, but more grateful; it ſoftens in the mouth, and grows of a whiter colour upon being chewed. Thrown upon live coals, it burns away in flame: it is in ſome meaſure ſoluble in water and in vinegar, with which it aſſumes the appearance of milk; but the reſinous part, amounting to about one half, ſubſides, on ſtanding.

Ammoniacum is an uſeful deobſtruent; and frequently preſcribed for opening obſtructions of the abdominal viſcera, and in hyſterical diſorders occaſioned by a deficiency of the menſtrual evacuations. It is likewiſe ſuppoſed to deterge the pulmonary veſſels, and proves of conſiderable ſervice in ſome kinds of aſthmas, where the lungs are oppreſſed by viſcid phlegm; in this intention, a ſolution of gum ammoniacum in vinegar of ſquills proves a medicine of great efficacy, though not a little unpleaſant. In long and obſtinate colics proceeding from viſcid matter lodged in the inteſtines, this gummy reſin has produced happy effects, after purges and the common carminatives had been uſed in vain. Ammoniacum is moſt commodiouſly taken in the form of pills: about a ſcruple may be given every night, or oftener. Externally it ſoftens and ripens hard tumors: a ſolution of it in vinegar ſtands recommended by ſome for reſolving even ſcirrhous ſwellings.

In the ſhops is prepared a ſolution of it in pennyroyal water, called, from its milky colour, *lac ammoniaci* [*L.*] It is an ingredient alſo in the *pectoral oxymel* and *pills*, in the *deobſtruent* and *gum pills* [*E.*] and in ſeveral *plaſters* [*L. E.*]

AMOMI VERI *ſemen: Amomi racemoſi C. B.* The ſeeds of the true amomum brought from the Eaſt-Indies [*L.*]

The true amomum is a round fruit, about the ſize of a middling grape; containing, under a membranous cover, a number of ſmall rough, angular ſeeds, of a blackiſh brown colour on the outſide, and whitiſh within: the ſeeds are lodged in three diſtinct cells; thoſe in each cell are joined cloſely together, ſo that the fruit, upon being opened, appears to contain only three ſeeds. Ten or twelve of theſe fruits grow together in a cluſter, and adhere, without any pedicle, to a woody ſtalk about an inch long; each ſingle fruit is ſurrounded by ſix leaves, in form of a cup; and the part of the ſtalk void of fruit is clothed with leafy ſcales.

The huſks, leaves, and ſtems, have a light grateful ſmell, and a moderately warm aromatic taſte: the ſeeds freed from the huſks, are in both reſpects much ſtronger; their ſmell is quick and penetrating, their taſte pungent, approaching to that of camphor. Notwithſtanding amomum is an elegant aromatic, it has long been a ſtranger to the ſhops.

It is directed as an ingredient in the theriaca. The college of Edinburgh has expunged that compoſition, and as the true amomum is not at preſent to be procured in this country, they have dropt its name. That of London allows the ſeeds of the following plant of our own growth to be ſubſtituted to thoſe of the oriental amomum.

AMOMI VULGARIS *ſemen: Siſonis quod amomum officinis noſtris C. B. Sii aromatici Tourn.* The ſeeds of the common amomum, or baſtard ſtone parſley [*L. E.*]

Theſe are very different in their appearance and manner of growth from the foregoing: they ſtand in form of umbels, and are joined two together without any common covering: they are ſmall, ſtriated, of an oval figure and brown colour. Their taſte is warm and aromatic, but conſiderably different from that of the amomum verum, and very far weaker. Water extracts little of their flavour by infuſion, but elevates the whole in diſtillation; rectified ſpirit extracts the whole, but elevates very little: hence the watery extract has no taſte or ſmell of the ſeeds; whilſt the ſpirituous poſſeſſes their flavour in great perfection. It is obſervable that the tincture drawn from them with pure ſpirit is of a green colour. Theſe ſeeds have been recommended as carminative, aperient, diuretic and emmenagogue; but they are at preſent little regarded in practice.

AMYGDALÆ AMARÆ et DULCES. Sweet and bitter almonds [*L. E.*]

The almond is a flattiſh kernel, of a white colour, covered with a thin browniſh ſkin; of a ſoft ſweet taſte; or a diſagreeable bitter one. The ſkins of both ſorts are unpleaſant, and covered with an acrid powdery ſubſtance: they are very apt to become rancid on keeping, and to be preyed on by a kind of inſect, which eats out the internal part, leaving the almond to appearance entire. To theſe circumſtances regard ought to be had in the choice of them.

The fruit which affords theſe kernels, is the produce of a tree greatly reſembling the peach, called by C. B. *amygdalus ſativa.* The eye diſtinguiſhes no difference betwixt the trees which produce the ſweet and bitter, or betwixt the kernels themſelves. It is ſaid that the ſame tree has, by a difference in culture, afforded both.

Both ſorts of almonds yield, on expreſſion, a large quantity of oil, which has no ſmell or any particular taſte. This oil ſeparates likewiſe upon boiling the almonds in water, and is gradually collected on the ſurface: but, on triturating the almonds with water, the oil and water unite together, by the mediation of the other matter of the kernel, and form an unctuous milky liquor.

Sweet almonds are of greater uſe in food than as medicines; but they are reckoned to afford little nouriſhment, and, when eaten in ſubſtance, are not eaſy of digeſtion, unleſs thoroughly comminuted. They are ſuppoſed, on account of their ſoft unctuous quality, to abtund acrimonious juices in the primæ viæ: peeled ſweet almonds, eaten ſix or eight at a time, ſometimes give preſent relief in the heartburn.

Bitter almonds have been found poiſonous to dogs, and ſundry other animals; and a water diſtilled from them, when made of a certain degree of ſtrength, has had like effects. Nevertheleſs, when eaten they appear innocent to men, and have been not unfrequently uſed as medicines. Boerhaave recommends them, in ſubſtance, as diuretics which heat but moderately, and which may therefore be ventured upon in acute diſeaſes.

The oils obtained by expreſſion from both ſorts of almonds are in their ſenſible qualities the ſame. The general virtues of theſe oils are, to blunt acrimonious humours, and to ſoften and relax the ſolids; hence their uſe, internally, in tickling coughs, heat of urine, pains and inflammations: and, externally, in tenſion and rigidity of particular parts.

The milky ſolutions of almonds in watery liquors, commonly called emulſions, contain the oil of the ſubject, and participate in ſome degree of the emollient virtue thereof; but have this advantage above the pure oil, that they may be given in acute or inflammatory diſorders, without danger of the ill effects which the oil might ſometimes produce; ſince emulſions do not turn rancid or acrimonious by heat, as all the oils of this kind, in a little time, do. Several unctuous and reſinous ſubſtances, of themſelves not miſcible with water, may by trituration with almonds be eaſily mixed with them into the form of an emulſion; and are thus excellently fitted for medicinal uſe. In this form, camphor and the reſinous purgatives may be commodiouſly taken. The only officinal preparations of almonds are the expreſſed oil and emulſion.

ANACARDIA. Anacardium, or Malacca bean.

This is the fruit of a tree growing in Malabar and other parts of the Eaſt-Indies. It is of a ſhining black colour, of the ſhape of a heart flattened, about an inch long, terminating at one end in an obtuſe point, and adhering by the other to a wrinkled ſtalk; it contains within two ſhells a kernel of a ſweetiſh taſte: betwixt the ſhells is lodged a thick and acrid juice.

The medicinal virtues of anacardia have been greatly diſputed; many have attributed to them the faculty of comforting the brain and nerves, fortifying the memory, quickening the intellect: and, hence, a confection made from them has been dignified with the title of *confectio ſapientum:* others think it better deſerves the name of *confectio ſtultorum,* and mention inſtances of its continued uſe having rendered people maniacal. But the kernel of anacardium is not different in quality from that of almonds. The ill effects attributed to this fruit belong only to the juice contained betwixt the kernels, whoſe acrimony is ſo great, that it is ſaid to be employed by the Indians as a cauſtic. This juice is recommended externally for tetters, freckles, and other cutaneous deformities; which it removes only by exulcerating or excoriating the part, ſo that a new ſkin comes underneath.

ANAGALLIDIS *folia: Anagallidis phœniceo flore C. B. et Anagallidis flore cæruleo C. B. Anagallidis arvenſis Lin.* Common, male and female pimpernel; the leaves.

Pimpernel is a low plant, in appearance reſembling chickweed; but eaſily diſtinguiſhable by its leaves being ſpotted underneath, and joined immediately to the ſtalk. The male and female pimpernels differ no otherwiſe than in the colour of their flowers; they are both found wild in the fields, but the male or red-flowered ſort is more common.

Both the pimpernels have an herbaceous, roughiſh taſte, with little or no ſmell. Many extraordinary virtues have been attributed to them. Geoffroy eſteems them cephalic, ſudorific, vulnerary, antimaniacal, antiepileptic, and alexeterial. Tragus, Caſpar Hoffman, Michaeli, and others, are alſo very liberal in their praiſes; one of theſe gentlemen declares, that he has known numerous inſtances of the ſingular efficacy of a decoction and tincture of pimpernel, in maniacal and melancholic deliria. But later practitioners have not been ſo happy as to meet with the like ſucceſs. Pimpernel is not unfrequently taken as food; it makes no unpleaſant ſalad; and in ſome parts of this kingdom, is a common pot-herb. A ſpirituous tincture of it contains nothing valuable: the only preparation that promiſes any utility, is an extract made with water; or the expreſſed juice depurated and inſpiſſated.

ANAGALLIS AQUATICA, vide BECABUNGA.

ANCHUSÆ *radix: Bugloſſi radici rubra Tourn. Anchuſæ tinctoriæ Lin.* Alkanet root [*E.*]

Alkanet is a rough hairy plant, much reſembling the vipers bugloſs: its chief difference from the common bugloſſes conſiſts in the colour of its roots; the cortical part of which is of a duſky red, and imparts an elegant deep red to oils, wax, and all unctuous ſubſtances, but not to watery liquors. This plant is a native of the warmer parts of Europe: it is ſometimes cultivated in our gardens; but the greateſt quantities are raiſed in Germany and France, particularly about Montpelier, whence the dried roots are uſually imported to us. The alkanet root produced in England is much inferior in colour to that brought from abroad; the Engliſh being only lightly reddiſh, the others of a deep purpliſh red: this has induced ſome to ſuſpect that the foreign roots owe part of their colour to art, but we think without ſufficient foundation.

Alkanet root has little or no ſmell: when recent, it has a bitteriſh aſtringent taſte, but, when dried, ſcarce any. As to its virtues, the preſent practice expects not any from it. Its chief uſe is for colouring oils, unguents, and plaſters. As the colour is confined to the cortical part, the ſmall roots are beſt, theſe having proportionably more bark than the large.

ANETHI *ſemen: Anethi hortenſis C. B. Anethi graveolentis Lin.* Dill ſeed [*L. E.*]

Dill is an umbelliferous plant, cultivated in gardens, as well for culinary as medical uſe. The ſeeds are of a pale yellowiſh colour, in ſhape nearly oval, convex on one ſide, flat on the other. Their taſte is moderately warm and pungent; their ſmell aromatic, but not of the moſt agreeable kind. Theſe ſeeds are recommended as a carminative, in flatulent colics proceeding from a cold cauſe or a viſcidity of the juices. The moſt efficacious preparations of them are the diſtilled oil, and a tincture or extract made with rectified ſpirit. The oil and ſimple water diſtilled from them are kept in the ſhops [*L.*]

ANGELICÆ *radix, folia, ſemen: Angelicæ ſativæ C. B. imperatoriæ ſativæ Tourn. Angelicæ Archangelicæ Lin.* Garden angelica; the roots, leaves, and ſeeds [*L E.*]

This is a large umbelliferous plant, growing ſpontaneouſly in the northern climates: for the uſe of the ſhops, it is cultivated in gardens, in the different parts of Europe. Bohemia and Spain are ſaid to produce the beſt. The London college direct the roots brought from Spain to be alone made uſe of. Angelica roots are apt to grow mouldy, and be preyed upon by inſects, unleſs thoroughly dried, kept in a dry place, and frequently aired. We apprehend that the roots which are ſubject to this inconvenience might be preſerved, by dipping them in boiling ſpirit, or expoſing them to its ſteam, after they are dried.

All the parts of angelica, eſpecially the roots, have a fragrant aromatic ſmell; and a pleaſant bitteriſh warm taſte, glowing upon the lips and palate for a long time after they had been chewed. The flavour of the ſeeds and leaves is very periſhable, particularly of the latter, which, on being barely dried, loſe greateſt part of their taſte and ſmell. The roots are more tenacious of their flavour, though even thoſe loſe part of it by keeping. The freſh root, wounded early in the ſpring, yields an odorous, yellow juice, which, ſlowly exſiccated, proves an elegant gummy-reſin, very rich in the virtues of the angelica. On drying the root, this juice concretes into diſtinct moleculæ, which, on cutting it longitudinally, appear diſtributed in little veins; in this ſtate, they are extracted by pure ſpirit, but not by watery liquors.

Angelica is one of the moſt elegant aromatics of European growth, though little regarded in the preſent practice. The root, which is the moſt efficacious part, is rarely met with in preſcription, and does not enter any oſicinal compoſition. The leaves are ingredients in the three alexeterial waters [*L.*]: the ſeeds, in the compound aniſeed water [*L.*], plague water, aqua mirabilis, and aromatic tincture [*E.*] The ſtalks make an agreeable ſweetmeat.

ANGUILLÆ HEPAR. The liver of the eel.

The liver and gall of the eel are extremely acrid. They have been held a ſpecific in difficult births; and enter the principal compoſitions for that intention in foreign pharmacopœias; although it appears, that in moſt caſes of this kind, acrid irritating medicines are really injurious. Boerhaave obſerves, that no fiſh has a more acrid gall than the eel; and ſays, that with pills made of the gall of the eel and pike, he has cured pale rickety children with ſwelled bellies: the gall powerfully promoting urine, and occaſioning the belly to ſubſide.

ANIME; [*E.*] a reſin exuding from the trunk of a large American tree, called by Piſo *jetaiba*, by the Indians *courbaril.*

This reſin is of a tranſparent amber colour, a light agreeable ſmell, and little or no taſte. It diſſolves entirely, but not very readily, in rectified ſpirit of wine; the impurities, which are often in large quantity, remaining behind. The Brazilians are ſaid to employ anime in fumigations for pains and aches proceeding from a cold cauſe: with us, it is rarely, if ever, made uſe of for any medicinal purpoſes.

ANISI *ſemen: Apii aniſi dicti ſemine ſuaveolente Tourn. Pimpinellæ Aniſi Lin.* Aniſe, the ſeed [*L. E.*]

Aniſe is an annual umbelliferous plant, growing naturally in Crete, Syria, and other places of the Eaſt. It is cultivated in ſome parts of France, Germany, and Spain, and may be raiſed alſo in England. The ſeeds brought from Spain, which are ſmaller than the others, are preferred.

Aniſeeds have an aromatic ſmell, and a pleaſant warm taſte, accompanied with a degree of ſweetneſs. Water extracts very little of their flavour; rectified ſpirit the whole.

Theſe ſeeds are in the number of the four greater hot ſeeds: their principal uſe is in cold flatulent diſorders, where tenacious phlegm abounds, and in the gripes to which young children are ſubject. Frederick Hoffman ſtrongly recommends them in weakneſs of the ſtomach, diarrhœæ, and for ſtrengthening the tone of the viſcera in general; and thinks they well deſerve the appellation given them by Helmont, *inteſtinorum ſolamen.*

The oſficinal preparations of theſe ſeeds are an *eſſential oil* [*L. E.*] and a ſpirituous *compound water* [*L. E.*] They are ingredients in *mithridate* and *theriaca*; and the eſſential oil in the *paregoric elixir* [*L.*]

ANONIS, vide ONONIS.

ANSERINA, vide ARGENTINA.

ANTIMONIUM [*L. E*] *ſtibium.* Antimony.

Antimony is a ponderous brittle mineral, compoſed of long ſhining ſtreaks like needles, intermingled with a dark lead-coloured ſubſtance ; of no manifeſt taſte or ſmell. There are ſeveral mines of it in Germany, Hungary, and France : and ſome likewiſe in England. The Engliſh ſort ſeems to be, of all the others, the leaſt proper for medicinal uſe, as frequently containing a portion of lead. The ſubſtances found mixed with the foreign ſorts are generally of the unfuſible ſtony kind, from which the antimony is melted out in veſſels, whoſe bottom is perforated with ſmall holes, and received in conical moulds. In theſe, the lighter and more droſſy matter ariſes to the ſurface ; while the more pure and ponderous ſubſides to the bottom. Hence the upper broad part of the loaves is conſiderably leſs pure than the lower.

The goodneſs of Antimony is judged of from its weight ; from the loaves not being ſpongy or blebby ; from the largeneſs of the ſtriæ ; and from the antimony totally evaporating in a ſtrong fire.

Antimony was employed by the ancients in collyria againſt inflammations of the eyes ; and for ſtaining the eyebrows black. Its internal uſe does not ſeem to have been eſtabliſhed till towards the end of the fifteenth century ; and, even at that time, it was by many looked upon as poiſonous. But experience has now fully evinced, that pure antimony, in its crude ſtate, has no noxious quality ; that ſome of the preparations of it are medicines of great efficacy ; and that though many of them are moſt violently emetic and cathartic, yet even theſe, by a ſlight alteration or addition, loſe their virulence, and become mild in their operation.

This mineral appears, from chemical experiments, to conſiſt of a metal, united with common ſulphur, and ſeparable in its metallic form by the ſame means whereby other metallic bodies are extracted from their ores.

The pure metal operates, in a very minute doſe, with extreme vehemence, as a purgative and emetic ; when combined with ſulphur, as in the crude mineral, its power is reſtrained : diveſted of the inflammable principle which it has in common with all perfectly metallic bodies, it becomes an indolent calx. See the preparations of antimony in the third part of this work.

ANTHORÆ *ſive antithoræ radix : Aconiti ſalutiferi C. B. Aconiti foliorum laciniis linearibus, ubique ejuſdem latitudinis Linnæi.* Wholeſome wolf's bane ; the roots.

This plant may be diſtinguiſhed from the poiſonous aconites by its leaves being more finely divided, and not at all bright or ſhining : it grows wild on the Alps. The root has been ſuppoſed uſeful againſt poiſons, particularly that of the *thora* (whence its name). Some nevertheleſs look upon this pretended antidote itſelf as unſafe. Fred. Hoffman ſays it is cathartic, and has produced dangerous diſorders of the ſtomach, accompanied with heat, thirſt, and anxiety. On the other hand, Geoffroy relates, that he never has obſerved any purgative quality in this root, or any ill conſequence from its uſe ; that he has frequently exhibited it, and always with good ſucceſs, againſt worms and in malignant fevers, eſpecially ſuch as were occaſioned by viſcidities in the ſtomach and inteſtines ; the doſe from a ſcruple to a dram. A competency of experiments to fully determine this point, is as yet wanting, the root never having come into general practice. Its taſte is acrid and bitter.

APES. Bees; their bodies, honey, and wax [*E.*]

Bees, dried and pulverized, are ſaid to cure the alopecia, and, given internally, to promote urine; but they have been for a long time ſtrangers to the ſhops. The honey and wax ſhall be treated of under the reſpective heads.

APII *ſeu eleoſelini radix : Apii foliis caulinis cuneiformibus Linnæi.* Smallage, the roots [*E.*]

This plant is larger than the garden *apium* (parſley), of a darker green colour, and of a ſtronger and more unpleaſant flavour. The roots are in the number of the five called opening roots, and have been ſometimes preſcribed as an ingredient in aperient apozems and diet-drinks; but are at preſent diſregarded. The ſeeds of the plant are moderately aromatic, and were formerly uſed as carminatives; in which intention they are, doubtleſs, capable of doing ſervice, though the other warm ſeeds, which the ſhops are furniſhed with, render theſe unneceſſary; and accordingly the Edinburgh college, which retains the roots, has expunged the ſeeds.

APIUM HORTENSE, vide PETROSELINUM.

ARANEARUM TELÆ [*E.*] Cobwebs.

Theſe are never met with in preſcription; but are ſometimes applied by the common people to ſtop the bleeding of ſlight wounds: this they ſeem to effect by adhering to the part, ſo as to cloſe the orifices of the veſſels, and prevent the effuſion of their contents.

ARESTA BOVIS, vide ONONIS.

ARGENTINÆ, *potentillæ, anſerinæ, folia : Pentaphylloidis minoris ſupini, ſeu procumbentis, foliis alatis argenteis et ſerratis, flore luteo Mor. Hiſt. Ox.* Silverweed, or wild tanſey; the leaves [*E.*]

This plant grows wild about the ſides of rivulets and other moiſt places: it has no ſtalk, the leaves lying flat on the ground. The writers on the materia medica in general look upon argentina as a very ſtrong aſtringent; miſled probably by its agreement in botanic characters with tormentil, which is known to be a powerful ſtyptic. The ſenſible qualities of *argentina* promiſe no great virtue of this kind; for to the taſte it diſcovers only a ſlight roughiſhneſs, whence it may be preſumed to be entitled to a place only among the milder corroborants. As the aſtringency of tormentil is confined chiefly to its root, it might be thought that the *argentina* alſo has an aſtringent root: the root of this plant, however, is found to have no other than a pleaſant ſweetiſh taſte, like that of parſnips, but not ſo ſtrong.

ARGENTUM. Silver [*L. E.*]

Abundance of virtues have been attributed to crude ſilver by the Arabians, and by ſome alſo of later times, but on very little foundation. This metal, taken in its crude ſtate, has no effect in the body; combined with a ſmall quantity of the nitrous acid, it proves a powerful, though not always a ſafe, hydragogue; with a larger, a ſtrong cauſtic. The nitrous acid is the only one that perfectly diſſolves this metal: on adding to this ſolution a minute portion of marine acid, or ſubſtances containing it, the liquor turns milky, and the ſilver falls to the bottom in form of a white calx: hence we are furniſhed with a method of diſcovering marine ſalt in waters, &c. See the preparations of ſilver in the third part.

ARGENTUM VIVUM: *Hydrargyrus*; *Mercurius.* Mercury or quickſilver [*L. E.*]

Mercury is an opake ſilver-coloured mineral fluid; appearing to the eye like tin or lead when melted: it is heavier than any other fluid, and than moſt of the metallic bodies: it does not congeal in the greateſt degree of natural cold hitherto known; in the fire it proves totally volatile. This mineral is either met with in its fluid form, in the earth; or extracted by art from certain ores. There are conſiderable mines of it in Hungary and Spain; but the greateſt quantities come from the Eaſt-Indies.

The uſe of mercury in medicine ſeems to have been little known before the fifteenth century. The ancients looked upon it as a corroſive poiſon, though, of itſelf, perfectly void of acrimony, taſte, and ſmell. There are examples of its having been lodged for years in cavities both of bones and fleſhy parts, without its having injured or affected them. Taken into the body in its crude ſtate, and undivided, it paſſes through the inteſtines unchanged, and has not been found to produce any conſiderable effect. It has indeed been recommended in aſthmas and diſorders of the lungs; but the virtues attributed to it in theſe caſes have not been warranted by experience.

Notwithſtanding the mildneſs and inactivity of crude quickſilver undivided; when reſolved by fire into the form of fume, or otherwiſe divided into very minute particles, and prevented from re-uniting by the interpoſition of proper ſubſtances, or combined with mineral acids, it has very powerful effects, affording the moſt violent poiſons, and the moſt excellent remedies with which we are acquainted.

The mercurial preparations, either given internally or introduced into the habit by external application, ſeem to liquefy all the juices of the body, even thoſe in the minuteſt and moſt remote veſſels; and may be ſo managed as to promote excretion through all the emunctories. Hence their common uſe in inveterate chronic diſorders proceeding from a thickneſs and ſluggiſhneſs of the humours, and obſtinate obſtructions of the excretory glands; in ſcrophulous and cutaneous diſeaſes; and in the venereal lues. If their power be not reſtrained by proper additions to certain emunctories, they tend chiefly to affect the mouth; and after having fuſed the juices in the remoter parts, occaſion a plentiful evacuation of them from the ſalival glands

The ſalutary effects of mercurials do not depend on the quantity of ſenſible evacuation. This medicine may be gradually introduced into the habit, ſo as, without occaſioning any remarkable diſcharge, to be productive of very happy effects. To anſwer this purpoſe, it ſhould be given in very ſmall doſes, in conjunction with ſuch ſubſtances as determine its action to the kidneys or the pores of the ſkin. By this method inveterate cutaneous and venereal diſtempers have been cured, without any other ſenſible excretion than a gentle increaſe of perſpiration or urine. Where there are ulcers in any part, they diſcharge for ſome time a very fetid matter, the quantity of which becomes gradually leſs, and at length the ulcer kindly heals. If the mercury ſhould at any time, from cold or the like, affect the mouth (which I have rarely found to happen) it may be reſtrained by omitting a doſe, and by warmth or ſuitable medicines promoting the perſpiration.

ARISTOLOCHIA. Birthwort. Three roots of this name are directed for medicinal uſe:

(1) ARISTOLOCHIA LONGA [*L. E.*] Long birthwort. This is a tuberous root, ſometimes about the ſize of the finger, ſometimes as thick as a man's arm, and a foot in length: it is nearly of an equal thickneſs all over, or a little thicker in the middle than at the ends: the outſide is of a browniſh colour; the inſide yellowiſh.

(2) ARISTOLOCHIA ROTUNDA [*E.*] Round birthwort. This has ſcarce any other viſible difference from the foregoing than its roundiſh ſhape.

(3) ARISTOLOCHIA TENUIS [*L.*] Slender birthwort. This is a long and ſlender root, rarely exceeding the thickneſs of a gooſe quill.

Theſe roots are the produce of Spain, Italy, and the ſouthern parts of France. Their ſmell is ſomewhat aromatic; their taſte warm and bitteriſh. Authors in general repreſent them as extremely hot and pungent: ſome ſay they are the hotteſt of all the aromatic plants; but, as they are uſually met with in the ſhops, they have no great pungency. The long and round ſorts, on being firſt chewed, ſcarce diſcover any taſte, but in a little time prove nauſeouſly bitteriſh; the long ſomewhat the leaſt ſo. The other ſort inſtantly fills the mouth with an aromatic bitterneſs, which is not ungrateful. Their medical virtues are, to heat, ſtimulate, attenuate viſcid phlegm, and promote the fluid ſecretions in general; they are principally celebrated in ſuppreſſions of female evacuations. The doſe in ſubſtance is from a ſcruple to two drams. The long ſort is recommended externally for cleanſing and drying wounds and ulcers, and in cutaneous diſeaſes. —The *ariſtolochia tenuis*, is an ingredient in theriaca; and in want of this ſpecies, the *longa* is allowed to be ſubſtituted for it by the London college.

ARMORACIA, vide RAPHANUS RUSTICANUS.

ARNICA, vide DORONICUM.

ARSENICUM. Arſenic.

Arſenic is contained, in greater or leſs quantity, in moſt kinds of ores, particularly in thoſe of tin and biſmuth, in the white pyrites, and the mineral called *cobalt*; from which laſt, greateſt part of the arſenic brought to us is extracted by a kind of ſublimation. The arſenic ariſes at firſt in the form of greyiſh *meal*, which, more carefully reſublimed, concretes into tranſparent maſſes, the *white* arſenic of the ſhops.

Arſenic, ſublimed with one tenth its weight of ſulphur, unites therewith into a bright yellow maſs, in ſome degree tranſparent; the common *yellow* arſenic. On doubling the quantity of ſulphur, the compound proves more opake and compact; of a deep red colour, reſembling that of cinnabar, but with this difference, that it loſes ſome of its beauty upon being reduced into powder, while that of cinnabar is improved by theſe means: this is the common *red* arſenic. By varying the proportions of arſenic and ſulphur, ſublimates may be obtained of a great variety of ſhades of yellow and red.

Natural mixtures of arſenic and ſulphur reſembling the foregoing preparations, are not unfrequently met with in the earth. The foſſil red arſenic is the *ſandaracha* of the Greeks, the *realgar* and *riſigal* of the Arabians. Both the red and yellow, when of a ſmooth uniform texture, are named *zarnichs*; and when compoſed of ſmall ſcales or leaves, *auripigmenta*, or *orpiments*: the laſt are the only ſubſtances to which the Greeks gave the name ἀρσένικον. That the zarnichs and orpiments really contain arſenic (contrary to the opinion of ſome writers) is evident from ſundry experiments, whereby a perfect arſenic, and in notable quantity, is obtainable from them. The compilers of the preceding edition of the Edinburgh Diſpenſatory, therefore, very juſtly gave *ſandaracha Græcorum* as a ſynonymon to *red arſenic*; and *auripegmentum* to the *yellow*.

The pure or white arſenic has a penetrating corroſive taſte; and taken into the body proves a moſt violent poiſon. Beſides the effects which it has in common with other corroſives, it remarkably attenuates the coats of the ſtomach, occaſions a ſwelling and ſphacelation of the whole body, and a ſudden putrefaction after death particularly, as is ſaid, of the genitals in men. Where the quantity is ſo very ſmall as not to prove fatal, tremors, palſies, and lingering hectics ſucceed. The remedies recommended againſt this poiſon are, milk and oily liquors immediately and liberally drunk.

The red and yellow arſenics, both native and factitious, have little taſte, and are much leſs virulent in their effects than the foregoing. Sulphur, which reſtrains the power of mercury and the antimonial metal, remarkably abates the virulence of this poiſonous mineral alſo. Such of theſe ſubſtances as participate more largely of ſulphur, ſeem to be almoſt innocent: the factitious red arſenic, and the native orpiments, have been given to dogs in conſiderable quantity, without being productive of any apparent ill conſequences.

ARTEMISIÆ *folia*: *Artemiſiæ vulgaris majoris C. B.* Mugwort; the leaves [*L. E.*]

This plant grows plentifully in fields, hedges, and waſte places, throughout England; and flowers in June. In appearance, it ſomewhat reſembles the common wormwood: the difference moſt obvious to the eye is in the flowers, thoſe of wormwood hanging downwards, while the flowers of mugwort ſtand erect.

The leaves of this plant have a light aromatic ſmell, and an herbaceous bitteriſh taſte. They are principally celebrated as uterine and antihyſteric: an infuſion of them is ſometimes drank, either alone, or in conjunction with other ſubſtances, in ſuppreſſion of the menſtrual evacuations. This medicine is certainly a very mild one, and conſiderably leſs hot than moſt others to which theſe virtues are attributed: in ſome parts of this kingdom, mugwort is of common uſe as a pot-herb.

ARI *radix*: *Ari maculati maculis nigris C. B.* Wake-robin the root [*L. E.*]

This plant grows wild under hedges, and by the ſides of banks, in moſt parts of England. It ſends forth in March, three or four triangular leaves, which are followed by a naked ſtalk, bearing a purpliſh piſtil incloſed in a long ſheath: this is ſucceeded in July, by a bunch of reddiſh berries. In ſome plants, the leaves are ſpotted with black, in others with white, and in others not ſpotted at all: the black ſpotted ſort is ſuppoſed to be the moſt efficacious, and hence is expreſsly directed by the London college.

All the parts of arum, particularly the root, have an extremely pungent, acrimonious taſte. If the root be but lightly chewed, it continues to burn and vellicate the tongue for ſome hours, occaſioning at the ſame time a conſiderable thirſt: theſe ſymptoms are alleviated by butter, milk, or oily liquors. Dried and kept for ſome time, it loſes much of its acrimony, and becomes at length an almoſt inſipid farinaceous ſubſtance.

The root is a powerful ſtimulant and attenuant. It is reckoned a medicine of great efficacy in ſome chachectic and chlorotic caſes, in weakneſs of the ſtomach occaſioned by a load of viſcid phlegm, and in ſuch diſorders in general as proceed from a cold ſluggiſh indiſpoſition of the ſolids and lentor of the fluids. I have experienced great benefit from it in rheumatic pains, particularly thoſe of the fixt kind, and which were ſeated deep. In theſe caſes I have given from ten grains to a ſcruple of the freſh root twice or thrice a day, made into a bolus or emulſion with unctuous and mucilaginous ſubſtances, which cover its pungency, and prevent its making any painful impreſſion on the tongue. It generally excited a ſlight tingling ſenſation through the whole habit, and, when the patient was kept warm in bed, produced a copious ſweat.

The only officinal preparation, in which this root is an ingredient, is a compound *powder*; in which form, its virtues are very precarious. Some recommend a tincture of it drawn with wine; but neither wine, water, nor ſpirit, extract its virtues.

ASAFOETIDA. Aſafetida [*L. E.*] the concrete juice of a large umbelliferous plant growing in Perſia.

This juice exudes (from wounds made in the root of the plant), liquid, and white like milk: on being expoſed to the air, it turns of a browniſh colour, and gradually acquires different degrees of conſiſtency. It is brought to us in large irregular maſſes, compoſed of various little ſhining lumps or grains, which are partly of a whitiſh colour, partly reddiſh, and partly of a violet hue. Thoſe maſſes are accounted the beſt which are clear, of a pale reddiſh colour, and variegated with a great number of elegant white tears.

This drug has a ſtrong fetid ſmell, ſomewhat like that of garlick; and a bitter, acrid, biting taſte. It loſes by age ſome of its ſmell and ſtrength, a circumſtance to be particularly regarded in its exhibition. It conſiſts of about one-third part of pure reſin, and two-thirds of gummy matter; the former ſoluble in rectified ſpirit, the latter in water. Proof ſpirit diſſolves almoſt the whole into a turbid liquor; the tincture in rectified ſpirit is tranſparent.

Aſafetida is the ſtrongeſt of the fetid gums, and of frequent uſe in hyſteric and different kinds of nervous complaints. It is likewiſe of conſiderable efficacy in flatulent colics; and for promoting all the fluid ſecretions in either ſex. The ancients attributed to this medicine many other virtues, which are at preſent not expected from it.

This gummy-reſin is an ingredient in the officinal gum pills, compound powder of myrrh, fetid tincture, tincture of ſoot, fetid volatile ſpirit [*L.*] and antihyſteric plaſter [*E.*]

ASARI *folia, radix: Aſari C. B. Aſari Europæi Lin.* Aſarabacca: the roots and leaves. —— The London college directs only the leaves; the Edinburgh both leaves and root.

Aſarum is a very low evergreen plant, growing naturally in France, Italy, and other warm countries: the dried roots have been generally brought from the Levant: thoſe of our own growth being ſuppoſed weaker.

Both the roots and leaves have a nauſeous, bitter, acrimonious, hot taſte; their ſmell is ſtrong and not very diſagreeable Given in ſubſtance from half a dram to a dram, they evacuate powerfully both upwards and downwards. It is ſaid, that tinctures made in ſpirituous menſtrua, poſſeſs both the emetic and cathartic virtues of the plant: that the extract obtained by inſpiſſating theſe tinctures, acts only by vomit, and with great mildneſs: that an infuſion in water proves cathartic, rarely emetic: and that aqueous decoctions made by long boiling, and the watery extract, have no purgative or emetic quality, but prove notable diaphoretics, diuretics, and emmenagogues.

The principal uſe of this plant, among us, is as a ſternutatory. The root of aſarum is perhaps the ſtrongeſt of all the vegetable errhines, white hellebore itſelf not excepted. Snuffed up the noſe, in the quantity of a grain or two, it occaſions a large evacuation of mucus, and raiſes a plentiful ſpitting. The leaves are conſiderably milder, and may be uſed, to the quantity of three, four, or five grains. Geoffroy relates, that, after ſnuffing up a doſe of this errhine at night, he has frequently obſerved the diſcharge from the noſe to continue for three days together; and that he has known a paralyſis of the mouth and tongue cured by one doſe. He recommends this medicine in ſtubborn diſorders of the head, proceeding from viſcid tenacious matter, in palſies, and in ſoporific diſtempers. The leaves are an ingredient in the *pulvis ſternutatorius* of the ſhops [*L. E.*]

ASCLEPIAS, vide VINCETOXICUM.

ASELLI, vide MILLEPEDÆ.

ASPALATHUS, vide RHODIUM,

ASPARAGI *radix: Aſparagi ſativi C. B. Aſparagi officinalis Lin.* Aſparagus; the root [*E.*]

This plant is cultivated in gardens for culinary uſe. The roots have a bitteriſh mucilaginous taſte, inclining to ſweetneſs, the fruit has much the ſame kind of taſte; the young ſhoots are more agreeable than either. Aſparagus promotes appetite, but affords little nouriſhment. It gives a ſtrong ill ſmell to the urine in a little time after eating it, and, for this reaſon, chiefly, is ſuppoſed to be diuretic; it is likewiſe eſteemed aperient and deobſtruent. The root is one of the five called opening roots. Some ſuppoſe the ſhoots to be moſt efficacious; others the root; and others the bark of the root. Stahl is of opinion, that none of them have any great ſhare of the virtues uſually aſcribed to them. Aſparagus appears from experience to contribute very little either to the exciting of urine when ſuppreſſed, or the increaſing of its diſcharge; and, in caſes where aperient medicines generally do ſervice, this has little or no effect.

ASPERULÆ *flores: Aſperulæ aut aſpergulæ adoratæ noſtratis Lob.* Woodroof; the flowers.

This is a low umbelliferous plant, growing wild in woods and copſes, and flowering in May. It has an exceeding pleaſant ſmell, which is improved by moderate exſiccation: the taſte is ſubſaline, and ſomewhat auſtere. It imparts its flavour to vinous liquors. Aſperula is ſuppoſed to attenuate viſcid humours, and ſtrengthen the tone of the bowels. It is recommended in obſtructions of the liver and biliary ducts, and by ſome in epilepſies and palſies. Modern practice has, nevertheleſs, rejected it.

ASPHALTUS, vide BITUMEN JUDAICUM.

ASPLENIUM, vide CETERACH.

ATRIPLICIS OLIDÆ *folia: Atriplices fœtidæ C. B. Chenopodii fœtidi Tourn. Chenopodii Vulvariæ Lin.* Stinking orach, or arach; the leaves [*L.*]

This is a low plant, ſprinkled all over with a kind of whitiſh clammy meal: it grows about dunghills, and other waſte places. The leaves have a ſtrong fetid ſmell, with which the hand, by a light touch, becomes ſo impregnated with, as not to be eaſily freed from it. Its ſmell has gained it the character of an excellent antihyſteric; and this is the only uſe to which it is applied. Tournefort recommends a ſpirituous tincture, others a decoction in water, and others a conſerve of the leaves, as of wonderful efficacy in uterine diſorders.

ATRIPLEX SATIVA. Garden orach, or arach.

The garden oraches (which are either of a pale greeniſh, or purpliſh red colour, and hence named *atriplex alba* and *rubra)* are chiefly employed for culinary purpoſes. They are cooling, and gently laxative; a decoction of the leaves is recommended in coſtiveneſs, where the patient is of a hot bilious diſpoſition.

AVENA [*E*] Oats.

This grain is an article rather of food than of medicine. It is ſufficiently nutritive and eaſy of digeſtion. The gruels made from it have likewiſe a kind of ſoft mucilaginous quality; by which they obtund acrimonious humours, and prove uſeful in inflammatory diſorders, coughs, hoarſeneſs, roughneſs, and exulcerations of the fauces.

AURANTIORUM HISPALENSIUM *ſuccus et cortex: Fructûs Mali aurantiæ majoris C. B.* Seville oranges; the juice and yellow rind [*L. E.*] The Edinburgh college uſes alſo the flowers of the tree.

The orange is a beautiful evergreen tree, or rather ſhrub, bearing flowers and fruits all the year: it is a native of the warmer climates, and does not well bear the winters of this.

The flowers are highly odoriferous, and have been, for ſome time paſt, of great eſteem as a perfume: their taſte is ſomewhat warm, accompanied with a degree of bitterneſs. They yield their flavour by infuſion to rectified ſpirit, and in diſtillation both to ſpirit and water: the bitter matter is diſſolved by water, and, on evaporating the decoction, remains entire in the extract. The diſtilled water was formerly kept in the ſhops, but, on account of the ſcarcity of the flowers, is now laid aſide: it is called by foreign writers *aqua naphæ*. An oil diſtilled from theſe flowers is brought from Italy under the name of *oleum*, or *eſſentia neroli*.

The outer yellow rind of the fruit is a grateful aromatic bitter, and, in cold phlegmatic conſtitutions, proves an excellent ſtomachic and carminative, promoting appetite, warming the habit, and ſtrengthening the tone of the viſcera. Orange peel appears to be very conſiderably warmer than that of lemons, and to abound more with eſſential oil: to this circumſtance therefore due regard ought to be had in the uſe of theſe medicines. The flavour of the former is likewiſe ſuppoſed to be leſs periſhable than that of the latter, hence the college employ orange peel in the ſpirituous bitter tincture, which is deſigned for keeping, whilſt, in the bitter watery infuſion, lemon peel is preferred. A ſyrup and two diſtilled waters are for the ſame reaſon prepared from the rind of oranges in preference to that of lemons.

The juice of oranges is a grateful acid liquor, of conſiderable uſe in febrile or inflammatory diſtempers, for allaying heat, abating exorbitant commotions of the blood, quenching thirſt, and promoting the ſalutary excretions: it is likewiſe of great uſe in ſcurvies, eſpecially when given in conjunction with the *cochlearia*, *naſturtium*, or other acrid antiſcorbutics, as in the *ſucci ſcorbutici* of the ſhops.

AURANTIA CURASLAVENSIA. Curaſſao oranges [*E.*]

Theſe are the ſmall young fruit of the Seville orange dried. Their firſt appearance in a public pharmacopœia was in that of Edinburgh, as an ingredient in the ſtomachic tincture and elixir. They appear very well adapted to that intention, being moderately warm bitteriſh aromatics, of a flavour ſufficiently agreeable.

AURIPIGMENTUM. Orpiment; a mineral compoſed of ſulphur and arſenic. See ARSENICUM.

AURUM. Gold.

This metal was introduced into medicine by the Arabians, who eſteemed it one of the greateſt cordials and comforters of the nerves. From them Europe received it, without any diminution of its character. In foreign pharmacopœias it is ſtill retained, and even mixed with the ingredients from which ſimple waters are to be diſtilled. But no one, it is preſumed, at this time, expects any ſingular virtues from it, ſince it certainly is not alterable in the human body. Mr. Geoffroy, though unwilling to reject it from the cordial preparations, honeſtly acknowledges, that he has no other reaſon for retaining it, than complaiſance to the Arabian ſchools. The chemiſts have endeavoured, by many elaborate proceſſes, to extract what they call a ſulphur or anima of gold: but no method is as yet known of ſeparating the component parts of this metal: all the tinctures of it and aurum potabiles, which have hitherto appeared, are real ſolutions of it in aqua regia, diluted with ſpirit of wine or other liquors, and prove injurious to the body rather than beneficial.

AXUNGIA. Fat.

A great variety of fats were introduced into medicine by the Arabians, and recommended as poſſeſſing diſtinct virtues. The college of Wirtemberg, in the edition of their diſpenſatory, publiſhed in 1741, directs no leſs than twenty-eight different fats to be kept in the ſhops: ſome of theſe, they inform us, are attenuating and reſolvent; ſuch as thoſe of the heron, wild cat, ſtork, partridge, coney, hare, fox, Alpine mouſe, the badger, boar, wolf, ſerpents, and vipers: others are heating, detergent and ſeptic; thoſe of the eel, the pike, and the umber: a third claſs is emollient; the fat of the ox, the deer, and the goat: and a fourth, emollient, digerent, and lenient; this laſt comprehends the fats of the duck, gooſe, dog, capon, beaver, horſe, hen, and human fat. Experience, however, does not countenance theſe different virtues aſcribed to different fats. They have all one common emollient quality, relax the part to which they are applied, and prevent perſpiration: theſe effects, with the conſequences of them, may be expected in a greater or leſs degree from fats of every kind. The London college has therefore retained only three fats, of different conſiſtences, for different mixtures, viz. viper's fat, hog's lard, and mutton ſuet; to which the Edinburgh college adds goat's ſuet. Theſe are certainly ſufficient for anſwering all the intentions for which ſubſtances of this kind are employed.

BALAUSTIA: *Flores balauſtiæ flore pleno majore C. B. Punicæ Granati Lin.* Balauſtines: the flowers of the balauſtine or double-flowered pomegranate tree [*L. E.*]

The balauſtine is a low tree, or rather ſhrub, growing wild in Italy, &c. The flowers are all of an elegant red colour, in appearance reſembling a dried red roſe. Their taſte is bitteriſh and aſtringent.

Balauſtines are recommended in diarrhœas, dyſenteries, and other caſes, where aſtringent medicines are proper. They are rarely directed in extemporaneous preſcription, and enter only one officinal compoſition, the *pulvis e ſuccino compoſitus* [*L.*]

BALSAMITÆ MARIS *ſive coſti hortorum folia: Menthæ hortenſis corymbiferæ C. B. Tanaceti Balſamitæ Lin.* Coſtmary; the leaves [*E.*]

This was formerly a very common garden plant, and frequently uſed both for culinary and medicinal purpoſes; but is at preſent very little regarded for either; though it ſhould ſeem, from its ſenſible qualities, to be equal or ſuperior, as a medicine, to ſome aromatic herbs, which practice has retained. The leaves have a bitteriſh, warm, aromatic taſte; and a very pleaſant ſmell, approaching to that of mint, or a mixture of mint and maudlin. Water elevates their flavour in diſtillation; and rectified ſpirit extracts it by infuſion.

BALSAMUM COPAIBA [*L. E.*] Balſam of Copaiba: a liquid reſinous juice, flowing from inciſions made in the trunk of a large tree which grows in the Spaniſh Weſt-Indies. Called by *Lin. Copaifera officinalis.*

This juice is clear and tranſparent, of a whitiſh or pale yellowiſh colour, an agreeable ſmell, and a bitteriſh pungent taſte. It is uſually about the conſiſtence of oil, or a little thicker: long kept, it becomes nearly as thick as honey, retaining its clearneſs; but has not been obſerved to grow dry or ſolid, as moſt of the other reſinous juices do. We ſometimes meet with a thick ſort of balſam of Copaiba, which is not at all tranſparent, or much leſs ſo than the foregoing, and generally has a portion of turbid watery liquor at the bottom. This ſort is probably either adulterated by the mixture of other ſubſtances, or has been extracted by coction from the bark and branches of the tree; its ſmell and taſte are much leſs pleaſant than thoſe of the genuine balſam.

Pure balſam of Copaiba diſſolves entirely in rectified ſpirit, eſpecially if the menſtruum be previouſly alkalized: the ſolution has a very fragrant ſmell. Diſtilled with water, it yields a large quantity of a limpid eſſential oil; and, in a ſtrong heat, without addition, a blue oil.

The balſam of Copaiba is an uſeful corroborating detergent medicine, accompanied with a degree of irritation. It ſtrengthens the nervous ſyſtem, tends to looſen the belly, in large doſes proves purgative, promotes urine, and cleanſes and heals exulcerations in the urinary paſſage, which it is ſuppoſed to perform more effectually than any of the other balſams. Fuller obſerves, that it gives the urine an intenſely bitter taſte, but not a violet ſmell as the turpentines do.

This balſam has been principally celebrated in gleets and the fluor albus, and, externally, as a vulnerary. The author above mentioned recommends it likewiſe in dyſenteries, in ſcorbutic cachexies, in diſeaſes of the breaſt and lungs, and in an acrimonious or putreſcent ſtate of the juices: he ſays, he has known very dangerous coughs, which manifeſtly threatened a conſumption, cured by the uſe of this balſam alone; and that, notwithſtanding its being hot and bitter, it has good effects even in hectic caſes.

The doſe of this medicine rarely exceeds twenty or thirty drops, though ſome direct ſixty or more. It may be conveniently taken in the form of an elæoſaccharum; or in that of an emulſion, into which it may be reduced by triturating it with almonds, or rather with a thick mucilage of gum arabic, till they are well incorporated, and then gradually adding a proper quantity of water

The only officinal preparation of this balſam is an empyreumatic oil, diſtilled with the addition of gum guaiacum [*L.*] The balſam itſelf is an ingredient in the balſamic tincture, and tincture of cantharides [*E.*]

BALSAMUM GILEADENSE,

vide OPOBALSAMUM.

BALSAMUM PERUVIANUM

[*L. E*] Balſam of Peru.

The common Peruvian balſam is ſaid to be extracted by coction in water, from an odoriferous ſhrub growing in Peru, and the warmer parts of America. This balſam, as brought to us, is nearly of the conſiſtence of thin honey, of a reddiſh brown colour, inclining to black, an agreeable aromatic ſmell, and a very hot biting taſte. Diſtilled with water, it yields a ſmall quantity of a fragrant eſſential oil of a reddiſh colour; and, in a ſtrong fire, without addition, a yellowiſh red oil

Balſam of Peru is a very warm aromatic medicine, conſiderably hotter, and more acrid than Copaiba. Its principal effects are, to warm the habit, to ſtrengthen the nervous ſyſtem, and attenuate viſcid humours. Hence its uſe in ſome kinds of aſthmas, gonorrhœas, dyſenteries, ſuppreſſions of the uterine diſcharges, and other diſorders proceeding from a debility of the ſolids, or a ſluggiſhneſs and inactivity of the juices. It is alſo employed externally, for cleanſing and healing wounds and ulcers; and ſometimes againſt palſies and rheumatic pains.

This balſam does not unite with water, milk, expreſſed oils, animal fats, or wax: it may be mingled in the cold with this laſt, as alſo with the ſebaceous ſubſtance called expreſſed oil of mace; but if the mixture be afterwards liquefied by heat, the balſam ſeparates and falls to the bottom. It may be mixed with water into the form of an emulſion after the ſame manner as the balſam of Copaiba. Alkaline lixivia diſſolve great part of it; and rectified ſpirit the whole.

This balſam is an ingredient in the ***balſamum guaiacinum, pilulæ aromaticæ*** [*L.*] ***tinctura balſamica, elixir pectorale, balſamum cephalicum,*** and ***balſamum Locatelli*** [*E.*]

There is another ſort of balſam of Peru, of a *white* colour, and conſiderably more fragrant than the former. This is very rarely brought to us. It is ſaid to be the produce of the ſame plant which yields the common or *black* balſam; and to exude from inciſions made in the trunk.

BALSAMUM TOLUTANUM [*L. E.*] Balſam of Tolu.

This flows from a tree of the pine kind, growing in Tolu, in the Spaniſh Weſt-Indies, called by Linnæus Toluifera Balſamum; whence the balſam is brought to us in little gourd ſhells. It is of a yellowiſh brown colour, inclining to red; in conſiſtence thick and tenacious: by age it grows hard and brittle, without ſuffering any great loſs of its more valuable parts. The ſmell of this balſam is extremely fragrant, ſomewhat reſembling that of lemons; its taſte warm and ſweetiſh, with little of the pungency, and nothing of the nauſeous reliſh, which accompany the other balſams. It has the ſame general virtues with the foregoing; but is much milder, and for ſome purpoſes, particularly as a corroborant in gleets and ſeminal weakneſſes, is ſuppoſed to be more efficacious. It is an ingredient in the *vulnerary balſam* [*L*] the *balſamic tincture,* and the *pectoral pills* and *elixir* [*E.*] A ſyrup alſo is impregnated with it in the ſhops.

BARDANÆ MAJORIS *ſeu lappæ majoris, radix et ſemen: Lappæ majoris, arcii Dioſcoridis C. B. Arctii Lappæ Lin.* Burdock; the roots and ſeeds [*E.*]

This is a common plant about way ſides, ſufficiently known from its ſcaly heads, or burs, which ſtick to the clothes. — The ſeeds have a bitteriſh ſubacrid taſte: they are recommended as very efficacious diuretics, given either in the form of emulſion, or in powder, to the quantity of a dram.—The roots taſte ſweetiſh, with a ſlight auſterity and bitteriſhneſs: they are eſteemed aperient, diuretic, and ſudorific; and ſaid to act without irritation, ſo as to be ſafely ventured upon in acute diſorders. Decoctions of them have of late been uſed in rheumatic, gouty, and other diſorders; and preferred by ſome to thoſe of ſarſaparilla.

BDELLIUM [*L. E.*] Bdellium.

Bdellium is a gummy-reſinous concrete juice brought from Arabia and the Eaſt-Indies, in glebes of different figures and magnitudes. It is of a dark reddiſh brown colour, and in appearance ſomewhat reſembles myrrh: upon cutting a piece, it looks ſomewhat tranſparent, and as Geoffroy juſtly obſerves, like glue. It grows ſoft and tenacious in the mouth, ſticks to the teeth, has a bitteriſh taſte, and not a diſagreeable ſmell. Bdellium is recommended as a ſudorific, diuretic,

tic, and uterine; and in external applications for maturating tumors, &c. In the preſent practice, it is ſcarce otherwiſe made uſe of than as an ingredient in the theriaca.

BECABUNGÆ, *ſeu Anagallidis aquaticæ folia: Veronicæ aquaticæ folio ſubrotundo Moriſ. hiſ. Veronicæ Becabungæ Lin.* Brooklime; the leaves [*L. E.*]

This is a low plant, common in little rivulets and ditches of ſtanding water: the leaves remain all the winter, but are in greateſt perfection in the ſpring. Their prevailing taſte is an herbaceous one, accompanied with a very light bitteriſhneſs.

Becabunga has been ſuppoſed to have a ſaponaceous detergent virtue, and to attenuate viſcid humours without pungency or irritation: hence it has been directed in the ſpecies of ſcurvy called hot, where the *cochleariæ*, and other acrid antiſcorbutics, were ſuppoſed to be leſs proper. It is now uſed only in compoſition, with thoſe plants, as in the *ſucci ſcorbutici* [*L. E.*] but does not perhaps add much to their efficacy. If any virtue be expected from becabunga, it ſhould be uſed as food.

BELLIDIS MAJORIS *folia: Bellidis majoris ſylveſtris caule folioſo C. B. Chryſanthemi Leucanthemi Lin.* Greater or ox-eye daiſy; the root [*E.*]

This plant is frequent in fields, and among corn, flowering in May and June. The leaves have a mucilaginous, ſubſaline, roughiſh taſte. They are ſaid to be detergent, reſolvent, aperient, and alſo moderately aſtringent. Geoffroy relates, that the herb, gathered before the flowers have come forth, and boiled in water, imparts an acrid taſte, penetrating and ſubtile like pepper; and that this decoction is an excellent vulnerary and diuretic: but this account ſeems to belong more properly to the following plant.

BELLIDIS MINORIS *ſive conſolidæ minimæ folia: Bellidis minoris ſylveſtris C. B. Bellidis perennis Lin.* Common daiſy; the leaves [*E.*]

This is common almoſt every where, and flowers early in the ſpring.—The leaves have a ſubtile ſubacrid taſte, and are recommended as vulneraries, and in aſthmas and hectic fevers, and ſuch diſorders as are occaſioned by drinking cold liquors when the body has been much heated. Ludovici prefers the *bellis minor* to the plants commonly uſed as antiſcorbutics, and reſolvents of coagulated blood in hypochondriacal diſorders.

BENZOINUM [*L. E.*] Benzoine.

Benzoine is a concrete reſinous juice, obtained from a large tree growing naturally in both the Indies, and hard enough to bear the winters of our own climate. The reſin is brought from the Eaſt-Indies only; in large maſſes compoſed of white and light brown pieces, or yellowiſh ſpecks, breaking very eaſily betwixt the hands: ſuch as is whiteſt, and free from impurities, is moſt eſteemed.

This reſin has very little taſte, impreſſing only a light ſweetneſs on the tongue: its ſmell is extremely fragrant and agreeable, eſpecially when heated. Committed to the fire in proper veſſels, it yields a conſiderable quantity of a white ſaline concrete, called *flowers*, of an acidulous taſte and grateful odour, ſoluble in rectified ſpirit, and by the aſſiſtance of heat in water.

The principal uſe of benzoine is in perfumes, and as a coſmetic: it is rarely met with in extemporaneous preſcription, and enters in ſubſtance only one officinal compoſition, the *balſamum traumaticum,* deſigned chiefly for external uſe. It ſhould nevertheleſs ſeem applicable to other purpoſes, and to have no bad title to the virtues of ſtorax and balſam of Tolu, at leaſt in a ſubordinate degree. The flowers are recommended in diſorders of the breaſt; and in this intention they are made an ingredient in the *paregoric elixir* [*L*], in the *pectoral elixir, electary,* and *pills,* and in the *troches of ſulphur* [*E.*]

BERBERIS, *ſeu oxyacanthæ Galeni, cortex et fructus: Berberis dumetorum C. B. Berberis vulg. Lin.* Barberry; the bark and fruit.

The barberry is a ſmall tree, or rather a large buſh, covered with an aſh-coloured bark, under which is contained another of a deep yellow: the berries are of an elegant red colour, and contain each two hard brown ſeeds. It grows wild on chalky hills in ſeveral parts of England; and is frequently planted in hedges and in gardens.

The outward bark of the branches, and the leaves, has an aſtringent acid taſte; the inner yellow bark, a bitter one: this latter is ſaid to be ſerviceable in the jaundice; and by ſome, to be an uſeful purgative.

The berries, which to the taſte are gratefully acid, and moderately reſtringent, have been given with good ſucceſs in bilious fluxes, and diſeaſes proceeding from heat, acrimony, or thinneſs of the juices. Among the Egyptians, barberries are employed in fluxes, and in malignant fevers, for abating heat, quenching thirſt, raiſing the ſtrength, and preventing putrefaction: the fruit is macerated for a day and night, in about twelve times its quantity of water, with the addition of a little fennel ſeed, or the like, to prevent offence to the ſtomach; the liquor ſtrained off, and ſweetened with ſugar, or ſyrup of citrons, is given the patient liberally to drink. Proſper Alpinus (from whoſe treatiſe *De medicina Egyptiorum* this account is extracted) informs us, that he took this medicine himſelf, with happy ſucceſs, in a peſtilential fever, accompanied with an immoderate bilious diarrhœa. A jelly of the fruit is directed by the Edinburgh college as an officinal.

BETÆ *folia, Betæ albæ vel palleſcentis quæ ſicula et cicla officinarum Mor. et Betæ rubræ vulgaris C. B. et Betæ rubræ radice rapæ C. B.* White and red beets; and the turnep-rooted red beet, or beet-rave [*E.*]

Theſe plants are cultivated in gardens, chiefly for culinary uſe. The eye diſtinguiſhes little other difference betwixt them, than that expreſſed in their titles. Decoctions of beets gently looſen the belly; hence they have been ranked among the emollient herbs: the plants remaining after the boiling are ſuppoſed to have rather a contrary effect. They afford little nouriſhment, and are ſaid by ſome to be prejudicial to the ſtomach. The juice expreſſed from the roots, is a powerful errhine.

BETONICÆ *folia: Betonicæ purpureæ C. B. Betonicæ officinalis Lin.* Common or wood-betony; the leaves [*E.*]

Betony is a low plant, growing in woods and ſhady places, in ſeveral parts of England; the flowers come forth in June and July; they are of a purpliſh colour, and ſtand in ſpikes on the tops of the ſtalks. The leaves and flowers have an herbaceous, roughiſh, ſomewhat bitteriſh taſte, accompanied with a very weak aromatic flavour. This herb has long been a favourite among writers on the materia medica, who have not been wanting to attribute to it abundance of good qualities. Experience does not diſcover any other virtue in betony, than that of a mild corroborant; as ſuch, an infuſion or light decoction of it, may be drunk as tea, or a ſaturated tincture in rectified ſpirit given in ſuitable doſes, in laxity and debility of the viſcera, and diſorders proceeding from them. The powder of the leaves, ſnuffed up the noſe, provokes ſneezing; and hence betony is ſometimes made an ingredient in ſternutatory powders: this effect does not ſeem to be owing, as is generally ſuppoſed, to any peculiar ſtimulating quality in the herb, but to the rough hairs with which the leaves are covered. The roots of this plant differ greatly in quality from the other parts: their taſte is bitter and very nauſeous: taken in a ſmall doſe, they vomit and purge violently, and are ſuppoſed to have ſomewhat in common with the roots of hellebore. It is pretty ſingular, if true, that betony affects thoſe who gather any conſiderable quantity of it, with a diſorder reſembling drunkenneſs; as affirmed by Simon Paulli and Bartholinus.

BETONICA AQUATICA, vide SCROPHULARIA AQUATICA MAJOR.

BETONICA PAULI, vide VERONICA MAS.

BETULÆ *cortex et lachryma: Betulæ C. B. Betulæ albæ Lin.* The birch tree; the bark and ſap [*E.*]

This tree grows wild in moiſt woods: its bark conſiſts of a thick brittle ſubſtance of a browniſh red colour; and of ſeveral very thin, ſmooth, white, tranſparent membranes. Theſe membranes are highly inflammable, and appear to abound with reſinous matter, though ſcarcely of any particular ſmell or taſte: the thick brittle part is leſs reſinous, and in taſte roughiſh: of the medical virtues of either, little or nothing is known with certainty.

Upon deeply wounding or boring the trunk of the tree in the beginning of ſpring, a ſweetiſh juice iſſues forth, ſometimes, as is ſaid, in ſo large quantity, as to equal in weight the whole tree and root: one branch will bleed a gallon or more in a day. This juice is chiefly recoommended in ſcorbutic diſorders, and other foulneſſes of the blood; its moſt ſenſible effect is to promote the urinary diſcharge.

BEZOAR *lapis.* Bezoar ſtone.

The Bezoar ſtone is a calculous concretion found in the ſtomach of of certain animals which are ſaid to be of the goat kind. It is compoſed of concentrical coats ſurrounding one another, with a little cavity in the middle, containing a bit of wood, ſtraw, hair, or the like ſubſtances.

The ſhops diſtinguiſh two ſorts of bezoar, one brought from Perſia and the Eaſt-Indies, the other from the Spaniſh Weſt-Indies. The former or better ſort called oriental bezoar, is of a ſhining dark green or olive colour, and an even ſmooth ſurface; on removing the outward coat, that which lies underneath it appears likewiſe ſmooth and ſhining. The occidental has a rough ſurface, and leſs of a green colour than the foregoing: It is likewiſe much heavier, more brittle, and of a looſer texture; the coats are thicker, and on breaking exhibit a number of ſtriæ curiouſly interwoven. The oriental is generally leſs than a walnut; the occidental for the moſt part larger, and ſometimes as big as a gooſe egg. The former is univerſally more eſteemed, and is the only ſort now retained by the London College: the Edinburgh, in a former edition of their pharmacopœia directed both; but they now ſeem to allow them to be uſed promiſcuouſly, retaining in their catalogue only the name *bezoar lapis.*

Kæmpfer (in whoſe *Amænitates exoticæ,* a full account of the bezoar animal may be ſeen) informs us, that this ſtone is in high eſteem among the Perſians, and even of a greater value than in Europe. This, with ſundry other circumſtances needleſs to relate here, has given occaſion to many to ſuſpect, that the true bezoar is never brought to us. Some authors relate with great confidence, that all the ſtones commonly ſold under this name are artificial compoſitions. That ſome of them are ſo, is evident; hence the great differences in the accounts which different perſons have given of their qualities; the ſtones examined by Slare as oriental bezoar did not diſſolve in acids; thoſe of which Grew and Boyle made trial, did: thoſe employed by Geoffroy (in ſome experiments related in the French memoirs 1710) did not ſeem to be acted on by rectified ſpirit; whilſt ſome of thoſe examined by Neumann at Berlin almoſt totally diſſolved. The common mark of goodneſs of this ſtone, is its ſtriking a deep green colour on white paper that has been rubbed with chalk.

Bezoar was not known to the ancient Greeks, and is firſt taken Notice of by the Arabians, who extol it in a great variety of diſorders, particularly againſt poiſons. Later writers alſo beſtow extraordinary commendations on it as a ſudorific and alexipharmac; virtues to which it certainly has no pretence. It is a morbid concretion, much of the ſame nature with the human calculus, of no ſmell or taſte, not digeſtible in the ſtomach of the animal in which it is found, and ſcarce capable of being acted on by any of the juices of the human body. It cannot be conſidered in any other light than as an abſorbent; and is much the weakeſt of all the common ſubſtances of that claſs. It has been given to half a dram, and ſometimes a whole dram, without any ſenſible effect; though the general doſe (on account of its great price) is only a few grains.

BISMALVA, vide ALTHÆA.

BISMUTHUM. Biſmuth.

Biſmuth is a ponderous brittle metal, reſembling in appearance the antimonial regulus and zinc, but greatly differing from them in quality. It diſſolves with vehemence in the nitrous acid, which only corrodes the regulus of antimony; and is ſcarce at all ſoluble in the marine acid which acts ſtrongly on zinc. A calx and flowers of this ſemimetal have been recommended as ſimilar in virtue to certain antimonial preparations; but are at preſent of no other uſe than as a pigment or coſmetic. See Part III. chap. ix.

BISTORTÆ *radix: Biſtortæ majoris radice minus intorta C. B. Polygoni*

Polygoni Biſtortæ Lin. Biſtort, or ſnakeweed; the root [*L. E.*]

This plant grows wild in moiſt meadows, in ſeveral parts of England: but is not very common about London. The root is about the thickneſs of the little finger, of a blackiſh brown colour on the outſide, and reddiſh within: it is writhed or bent vermicularly (whence the name of the plant) with a joint at each bending, and full of buſhy fibres; the root of the ſpecies here meant has, for the moſt part, only one or two bendings; others have three or more.

All the parts of biſtort have a rough auſtere taſte, particularly the root, which is one of the ſtrongeſt of the vegetable aſtringents. It is employed in all kinds of immoderate hæmorrhages and other fluxes, both internally and externally, where aſtringency is the only indication. It is certainly a very powerful ſtyptic, and is to be looked on ſimply as ſuch; to the ſudorific, antipeſtilential, and other like virtues atributed to it, it has no other claim, than in conſequence of its aſtringency, and of the antiſeptic power which it has in common with other vegetable ſtyptics. The largeſt doſe of the root in powder is one dram. It enters only one officinal compoſition, the *ſpecies e ſcordio* [*L.*]

BITUMEN JUDAICUM [*L.*] *Aſphaltus.* Jews pitch.

This is a light, ſolid bitumen, of a duſky colour on the outſide, and a deep ſhining black within; of very little taſte, and ſcarcely any ſmell, unleſs heated, when it emits a ſtrong pitchy one. It is found plentifully in the earth, in ſeveral parts of Egypt, and on the ſurface of the Dead Sea; but is very rarely brought to us. In its room, the ſhops employ other bituminous ſubſtances found in France, Germany, and Switzerland. Theſe have a much ſtronger pitchy ſmell; but in other reſpects agree pretty much with the true aſphaltus. Sometimes pitch itſelf, or the caput mortuum remaining after the diſtillation of amber, are ſubſtituted. Abundance of virtues is attributed to this bitumen, as reſolvent, diſcutient, glutinant, ſudorific, emollient, emmenagogue, &c. but it has not for a long time been any otherwiſe uſed than as an ingredient in theriaca. The Edinburgh college having now expunged the theriaca, have expunged alſo the bitumen Judaicum.

BOLI. Boles are viſcid earths, leſs coherent, and more friable than clay, more readily uniting with water, and more freely ſubſiding from it. They are ſoft and unctuous to the touch, adhere to the tongue, and by degrees melt in the mouth, impreſſing a light ſenſe of aſtringency. A great variety of theſe kinds of earths has been introduced into medicine; the principal of which are the following.

(1) BOLUS ARMENA. Armenian bole, or bole armenic [*L. E.*] Pure Armenian bole is of a bright red colour, with a tinge of yellow: it is one of the hardeſt and moſt compact of the bodies of this claſs, and not ſmooth or gloſſy like the others, but generally of a rough duſty ſurface. It raiſes no effervеſcence with acids.

(2) BOLUS GALLICA. French bole [*L. E.*] The common French bole is of a pale red colour, variegated with irregular ſpecks or veins of white and yellow. It is much ſofter than the foregoing; and ſlightly effervеſces with acids.

(3) Bolus Blesensis. Bole of Blois. This is a yellow bole, remarkably lighter than the former, and than moſt of the other yellow earths. It efferveſces ſtrongly with acids.

(4) Bolus Bohemica. Bohemian bole. This is of a yellow colour, with a caſt of red, generally of a flaky texture. It is not acted on by acids.

(5) Terra Lemnia. Lemnian earth. This is a pale red earth; ſlightly effervеſcing with acids.

(6) Terra Silesiaca. Sileſian earth, is of a browniſh yellow colour: acids have no ſenſible effect upon it. Theſe and other earths, made into little maſſes, and ſtamped with certain impreſſions, are called *terræ ſigillatæ*.

The boles of Armenia and Blois, and the Lemnian earth, are rarely met with genuine in the ſhops; the coarſer boles, or white clay coloured with ochre, caput mortuum of vitriol, &c. frequently ſupply their place. The genuine may be diſtinguiſhed by their ſubſiding uniformly from water, without any ſeparation of their parts; the genuine yellow boles retain their colour, or have it deepended, in the fire; whilſt the counterfeit ſorts burn red.

Theſe earths have been recommended as aſtringent, ſudorific, and alexipharmac; in diarrhœas, dyſenteries, hæmorrhages, and in malignant and peſtilential diſtempers. In inteſtinal fluxes, and complaints in the firſt paſſages from thin acrimonious humours, they may, doubtleſs, be of ſome uſe; but the virtues aſcribed to them in the other caſes appear to have no foundation.

In the London pharmacopœia bole is an ingredient in the *pulvis e bolo, e ſcordio, tabellæ cardialgicæ, theriaca*, and in one compoſition for external uſe, viz. the *lapis medicamentoſus*. No earth of this kind is employed in any of the compoſitions of the Edinburgh pharmacopœia.

BOMBYX, vide Sericum.

BONI HENRICI *ſive lapathi unctuoſi folia: Lapathi unctuoſi olidi perennis ſpinachiæ facie Moriſ. Chenopodii Boni Henrici Lin.* Engliſh herb mercury; the leaves [*E.*]

This herb is met with by road ſides, and in uncultivated places. It is ranked among the emollient herbs, but rarely made uſe of in practice. The leaves are applied by the common people for healing ſlight wounds, cleanſing old ulcers, and other purpoſes of that kind.

BORRAGINIS *flores: Boraginis flore cæruleo J. B. Boraginis officinalis Lin.* Borage; the flowers [*E.*]

This is a rough plant, clothed with ſmall prickly hairs: it grows wild in waſte places, and upon old walls. An exhilirating virtue has been attributed to the flowers of borage, which are hence ranked among thoſe called cordial flowers; but they appear to have very little claim to any virtue of this kind, and ſeem to be altogether inſignificant.

BORAX [*L. E.*] Tincar, or Borax.

This is a ſaline ſubſtance, brought from the Eaſt-Indies in great maſſes, compoſed partly of large cryſtals, but chiefly of ſmaller ones, partly white and partly green, joined together as it were by a greaſy yellow ſubſtance, intermingled with ſand, ſmall ſtones, and other impurities. The purer cryſtals, expoſed to the fire, melt into a kind of glaſs, which is nevertheleſs diſſoluble in water.

This ſalt diſſolved and chryſtallized, forms ſmall tranſparent maſſes: the refiners have a method of ſhooting it into larger cryſtals; but theſe differ in ſeveral reſpects from the genuine ſalt, inſomuch that Cramer calls them not a purified, but adulterated borax. The origin of this ſalt is as yet unknown, and its compoſition is known only in part. Thus much experiments have clearly ſhewn, that it conſiſts of a fixt alkaline ſalt, the ſame with the baſis of ſea ſalt, in ſome degree neutralized by a ſmaller proportion of another ſaline ſubſtance, which has no where, that I know of, been yet diſcovered but in borax itſelf.

Nor have the medical virtues of borax been ſufficiently aſcertained by experience. It is ſuppoſed to be, in doſes of half a dram or two ſcruples, diuretic, emmenagogue, and a promoter of delivery; the only officinal compoſition it is employed in is the *pulvis ad partum* of the Edinburgh pharmacopœia. Mr. Biſſet, in an eſſay on the medical conſtitution of Great Britain, recommends a ſolution of this ſalt in water as the moſt powerful diſſolvent yet known of aphthous cruſts in the mouth and fauces of children. There are ſtrong reaſons to believe, that the virtues of borax are much greater than they are in general ſuppoſed to be.

BOTRYOS *folia: Chenopodii ambroſioidis folio ſinuato Tourn. Atriplicis odoræ ſeu ſuaveolentis Moriſ. Chenopodii Botryos Lin.* Jeruſalem oak; the leaves [*E.*]

This plant is cultivated in gardens. It has a ſtrong, not diſagreeable ſmell; and a warm ſomewhat pungent taſte. It is recommended as a carminative pectoral. Infuſions of it may be drunk as tea.

BRASSICA SATIVA: *Braſſica capitata alba C. B. et Braſſica capitata rubra C. B. et Braſſica rubra C. B. et Braſſica alba capite oblongo non penitus clauſo C. B. Braſſica ſubauda Ger. et Park. et Braſſica cauliflora C. B.* White and red cabbages, coleworts, Savoy cabbages, and cauliflower [*E.*]

Theſe are cultivated in gardens rather for culinary than medicinal uſe. They are all ſuppoſed to be hard of digeſtion, to afford little nouriſhment, and to produce flatulencies; though probably on no very good foundation. They tend ſtrongly to putrefaction, and run into this ſtate ſooner than almoſt any other vegetable; when putrefied, their ſmell is likewiſe the moſt offenſive, greatly reſembling that of putrefied animal ſubſtances. A decoction of them is ſaid to looſen the belly. Of all theſe plants, cauliflower is reckoned the eaſieſt of digeſtion. The white is the moſt fetid; and the red moſt emollient or laxative: a decoction of the latter is recommended for ſoftening acrimonious humours in ſome diſorders of the breaſt, and in hoarſeneſs.

BRASSICÆ MARINÆ *ſeu ſoldanellæ folia; Convolvuli maritimi ſoldanellæ dicti Raii.* Sea coleworts, Scotch ſcurvygraſs, or ſoldanella; the leaves [*E.*]

This is a trailing plant, growing on the ſea beach in many parts of the north of England. The root, leaves, and ſtalks, yield a milky juice.

Soldanella is a ſtrong cathartic, operating very churliſhly, and hence deſervedly rejected from practice. Thoſe who recommend its uſe differ conſiderably with regard to the doſe; ſome direct half a dram, others three drams, and others a whole handful.

BRITANNICA, vide Lapathum.

BRUNELLA, vide Prunella.

BRUSCUS, vide Ruscus.

BRYONIÆ ALBÆ *radix: Bryoniæ aſperæ ſive albæ baccis rubris C. B.* White bryony, or wild vine; the roots [*E.*]

This is a rough plant, growing on dry banks under hedges, and climbing upon the buſhes. The roots are large, ſometimes as thick as a man's thigh; their ſmell, when freſh, is ſtrong and diſagreeable; the taſte nauſeouſly bitter, acrid, and biting: the juice is ſo ſharp, as in a little time to excoriate the ſkin: in drying, they loſe great part of their acrimony, and almoſt the whole of their ſcent.

Bryony root is a ſtrong irritating cathartic; and as ſuch has ſometimes been ſucceſsfully exhibited in maniacal caſes, in ſome kinds of dropſies, and in ſeveral chronical diſorders, where a quick ſolution of viſcid juices, and a ſudden ſtimulus on the ſolids, were required. An extract prepared by water, acts more mildly, and with greater ſafety than the root in ſubſtance; given from half a dram to a dram, it is ſaid to prove a gentle purgative, and likewiſe to operate powerfully by urine.

Bryony root, applied externally, is ſaid to be a powerful diſcutient: it enters a cataplaſm for that intention in the Edinburgh pharmacopœia.

BUFO. The toad.

This animal has been generally looked upon as poiſonous, particularly its ſaliva, and a certain acrid liquor, ſuppoſed to be the urine, which it throws out, when irritated, to a conſiderable diſtance. It was firſt introduced into medicine upon occaſion of a cure performed on a hydropic perſon, to whom powdered toads were given in order to diſpatch him, but who voided a large quantity of urine after taking them, and ſoon recovered from his diſorder: ſince this time, the toad dried by a gentle heat and pulverized, has been greatly eſteemed as a diuretic. This preparation is ſaid likewiſe, applied externally to the navel, to reſtrain hæmorrhages, particularly thoſe from the uterus. The Edinburgh college, in preceding editions of their pharmacopœia, retained the toad in their catalogue of ſimples, and gave likewiſe the proceſs of drying it, but have now wholly rejected this loathſome animal.

BUGLOSSI *radix, folia, flores: Bugloſſi anguſtifolii majoris C. B. Anchuſæ officinalis Lin.* Garden Bugloſs; the roots, leaves, and flowers [*E.*]

This is a rough, hairy plant, reſembling borage, but leſs prickly: a wild ſort is commonly met with in hedges and among corn, which differs from the garden ſort only in being ſmaller. Bugloſs has a ſlimy ſweetiſh taſte, accompanied with a kind of coolneſs: the roots are the moſt glutinous, and the flowers the leaſt ſo. Theſe qualities point out its uſe in hot bilious or inflammatory diſtempers, and a thin acrimonious ſtate of the fluids. The flowers are one of the four called cordial flowers: the only quality they have that can entitle them to this appellation, is, that they moderately cool and ſoften, without offending the palate or ſtomach; and thus, in warm climates, or in hot diſeaſes, may in ſome meaſure refreſh the patient.

BUGULÆ *ſive conſolidæ mediæ folia*; *Bugulæ ſylvaticæ vulgaris cæruleæ Morriſon. Adjugæ reptantis Lin.* Bugle or middle conſound; the leaves [*E.*]

This grows wild in woods, hedges, and moiſt meadows. The leaves have, at firſt, a ſweetiſh taſte, which gradually becomes bitteriſh and roughiſh. They are recommended as vulnerary medicines, and in all caſes where mild aſtringents or corroborants are proper.

BUNIAS, vide NAPUS.

BURSÆ PASTORIS *folia*: *Thlaſpis fatui, burſæ paſtoris dicti Raii.* Shepherdſpurſe; the leaves.

This plant is common in waſte places; and is found in flower all the ſummer. Shepherdſpurſe has long been celebrated as an aſtringent, and ſtrongly recommended in diarrhœas, dyſenteries, uterine fluors, and in general in all diſeaſes where aſtringents of any kind can avail. Some have eſteemed it ſo powerful a ſtyptic, as ſcarce to be ſafely adminiſtered internally. Others have thought it to be of a hot fiery nature, and ſuppoſed it to ſtop fluxes and hæmorrhages, by coagulating the juices like alcohol, and burning or ſearing the orifices of the veſſels. The ſenſible qualities of ſhepherdſpurſe diſcover little foundation for either of theſe opinions; it has no perceptible heat, acrimony, pungency, and ſcarcely any aſtringency: the taſte is almoſt merely herbaceous, ſo as ſufficiently to warrant the epithet given this plant by Mr. Ray, *Fatuum.*

BUXI *lignum* [*L.*] *et folia* [*E.*]: *Buxi arboreſcentes C. B. Buxi ſempervirentis Lin.* The box tree; the leaves and wood.

The box is a ſmall tree, growing wild in ſome parts of Kent and Surry. The wood is of a yellow colour, more ſolid, compact, and ponderous than any other of the European woods. The leaves have a ſtrong nauſeous taſte, and when freſh, a fetid ſmell: they are ſaid to purge violently, in the doſe of a dram. A decoction of the wood is recommended by ſome as powerfully ſudorific, preferable even to guaiacum: but the taſte readily diſcovers that it wants the qualities of that wood. Neither the wood nor leaves of the box tree are at preſent employed for any other medicinal purpoſe than for the diſtillation of an empyreumatic oil [*L.*] and an oil of nearly the ſame quality is obtainable by the ſame treatment from almoſt all woods.

CACAO [*E.*] *Theobroma Cacao Lin.* Chocolate nuts.

Theſe are the fruit of an American tree reſembling the almond. The principal uſe of theſe nuts is for the preparation of the dietetic liquor chocolate. This is a mild, unctuous, nutritious fluid, capable of ſoftening acrimonious humours, and of great ſervice in conſumptive diſorders: eſpecially if made with milk, and with only a ſmall proportion of aromatics.

CALAMINARIS LAPIS [*L. E.*] Calamy or calamine ſtone.

This mineral is found plentifully in England, Germany, and other countries, either in diſtinct mines, or intermingled with the ores of different metals. It is uſually of a greyiſh, browniſh, yellowiſh, or pale reddiſh colour; conſiderably hard, though not ſufficiently ſo to ſtrike fire with ſteel. It has been looked upon by ſome as a ſimple earth, by others as an iron ore: later experiments have diſcovered it to be an ore of zinc. Calamine is generally roaſted or calcined before it comes into the ſhops, in order to ſeparate ſome ſulphureous or arſenical matter which the crude mineral is ſuppoſed to contain, and to render it more eaſily reducible into a fine powder. In this ſtate, it is employed in collyria againſt defluxions of thin acrid humours upon the eyes; for drying up moiſt, running ulcers; and healing excoriations. It is the baſis of an officinal *epulotic cerate.*

CALAMINTHÆ *folia: Calaminthæ pulegii odore ſeu nepetæ C. B. Calaminthæ foliis ovatis, obtuſis, caule procumbente Halleri. Meliſſæ nepetæ Lin.* Field calamint; the leaves [*L.*]

This is a low plant, growing wild about hedges and highways, and in dry ſandy ſoils. The leaves have a quick warm taſte, and ſmell ſtrongly of pennyroyal: as medicines, they differ little otherwiſe from ſpearmint, than in being ſomewhat hotter, and of a leſs pleaſant odour; which latter circumſtance has procured calamint the preference in hyſteric caſes.

CALAMINTHÆ MONTANÆ *folia: Calaminthæ flore magno vulgaris J. B. Meliſſæ Calaminthæ Lin.* Common calamint; the leaves [*E.*]

This plant, notwithſtanding its name, is, among us, much leſs common than the former, which has generally ſupplied its place in the markets: hence the London college have now dropt this *montana,* and received the other. The *calamintha montana* is alſo leſs efficacious than the foregoing ſort: the taſte is weaker; the ſmell approaches to that of the wild mints, without any thing of the ſtrong pennyroyal flavour of the other.

CALAMI AROMATICI *radix: Acori veri ſive calami aromatici officinarum C. B. Acori Calami Lin.* Sweet ſcented flag; the roots [*L. E.*]

This flag reſembles, as to its leaves, the common *iris,* but, in other reſpects differs greatly from it: the ſtalk grows at a little diſtance from the leaves; the lower half, up to where the flowers come forth, is roundiſh; the part above this, broad like the other leaves; the flowers are very ſmall, whitiſh, and ſtand in a kind of head about the ſize of a finger. This plant grows plentifully in rivulets and marſhy places, about Norwich and other parts of this iſland; in the canals of Holland; in Switzerland; and in other countries of Europe. The ſhops have been uſually ſupplied from the Levant with dried roots, which do not appear to be ſuperior to thoſe of our own growth.

The root of acorus is full of joints, crooked, ſomewhat flatted on the ſides, internally of a white colour, and looſe ſpongy texture: its ſmell is ſtrong; the taſte warm, acrid, bitteriſh, and aromatic; both the ſmell and taſte are improved by exſiccation. This root is generally looked upon as a carminative and ſtomachic medicine, and as ſuch is ſometimes made uſe of in practice. It is ſaid by ſome to be ſuperior in aromatic flavour to any other vegetable that is produced in theſe northern climates: but ſuch as I have had an opportunity of examining, fell ſhort, in this reſpect, of ſeveral of our common plants. It is, nevertheleſs, a ſufficiently elegant aromatic. It is an ingredient in the mithridate and theriaca of the London pharmacopœia, and in the aromatic and ſtomachic tinctures and compound arum powder, of the Edinburgh. The freſh root, candied after the manner directed in our diſpenſatory for candying eryngo root, is ſaid to be employed at Conſtantinople as a preſervative againſt epidemic diſeaſes. The leaves of this plant have a ſweet fragrant ſmell, more agreeable, though weaker, than that of the roots.

CALENDULÆ *flores: Calendulæ ſativæ Raii: Calendulæ flore ſimplici J. B. Calendulæ officinalis Lin.* Garden marigold; the flowers [*E.*]

This herb is common in gardens, where it is found in flower greateſt part of the ſummer. Marigold flowers are ſuppoſed to be aperient and attenuating; as alſo cardiac, alexipharmac, and ſudorific. They are principally celebrated in uterine obſtructions, the jaundice, and for throwing out the ſmall-pox. Their ſenſible qualities give little foundation for theſe virtues: they have ſcarcely any taſte, and no conſiderable ſmell. The leaves of the plant diſcover a viſcid ſweetiſhneſs, accompanied with a more durable ſaponaceous pungency and warmth. Theſe ſeem capable of anſwering ſome uſeful purpoſes, as a ſtimulating, aperient, antiſcorbutic medicine.

CALX VIVA [*L. E.*] Quicklime. Quicklime is uſually prepared among us, by calcining certain ſtones of the chalky kind. All chalks and marbles, and, in general, all the mineral earths that diſſolve in acids, burn into quicklime; with this difference, that the more compact the ſtone, generally the ſtronger is the lime. In maritime countries, in defect of the proper ſtones, ſea ſhells are made uſe of, which afford a calx agreeing in moſt reſpects with the ſtone limes.

All theſe limes are, when freſh burnt, highly acrimonious and corroſive. In this ſtate they are employed in ſome external applications as a depilatory; for rendering ſulphur ſoluble in water [*L.*]; and for increaſing the power of fixt alkaline ſalts either for the purpoſes of a cauſtic [*L. E.*] or to enable them more readily to diſſolve oils for making ſoap [*L.*] If the lime be expoſed for a length of time to the air, it falls by degrees into a powder, and loſes much of its acrimony.

Water, poured directly upon quicklime, takes up a conſiderable portion of it. The ſolution has a ſtrong taſte, ſomewhat ſtyptic, drying the mouth, and accompanied with a kind of ſweetiſhneſs. This liquor does not effervеſce either with acids or alkalies, but is rendered by the latter turbid and milky: it prevents the coagulation of milk, and hence is ſometimes made uſe of along with milk diets: agitated with expreſſed oils, it unites with them into a thick compound, recommended by Dr. Slare againſt burns and inflammations. Both the ſimple ſolution of the lime, and the ſolution impregnated with other materials, are directed as officinal, under the titles of ſimple and compound lime waters [*L. E.*]

Lime water, drunk to the quantity of a quarter of a pint, three or four times a day, and continued for a length of time, has been found ſerviceable in ſcrophulous caſes, and other obſtinate chronic diſorders. It generally promotes urine, and not unfrequently the cuticular diſcharge: for the moſt part it binds the belly, and ſometimes produces troubleſome coſtiveneſs, unleſs this effect be occaſionally provided againſt, by the interpoſition of proper medicines. It does good ſervice in debility and laxity of the viſcera in general; in thoſe of the uterine and ſeminal veſſels it is particularly recommended. Care muſt be had not to uſe this medicine too liberally in hot bilious conſtitutions, or where the patient is much emaciated, or the appetite weak, or at the time of any critical or periodical evacuations. Its principal uſe is in cold, moiſt, ſluggiſh, and corpulent habits.

This liquor has lately been found an efficacious diſſolvent of the human calculus. The lime water prepared from calcined oyſter ſhells proves, for this purpoſe, a more powerful menſtruum than that made from the ſtone limes, the diſſolving powers of the former being more than double to that of the latter. See a paper on this ſubject in the Edinburgh Eſſays, vol. v. art. 69. Abridg. vol. i. 471.

CAMPECHENSE LIGNUM, vide LIGNUM CAMPECHENSE.

CAMPHORA [*L. E.*] *Ex Lauro camphora Lin.* Camphor is a ſolid concrete, extracted from the wood and roots of a tree growing in Japan, by a proceſs ſimilar to that by which eſſential oils are obtained. As it firſt ſublimes from the wood, it appears browniſh, compoſed of ſemipellucid grains mixed with dirt: in this ſtate it is exported by the Dutch, and purified by a ſecond ſublimation; after which, it is reduced into loaves (in which it is brought to us) probably by fuſion in cloſe veſſels; for it does not aſſume this form in ſublimation.

Pure camphor is very white, pellucid, ſomewhat unctuous to the touch; of a bitteriſh, aromatic, acrid taſte, yet accompanied with a ſenſe of coolneſs; of a very fragrant ſmell, ſomewhat like that of roſemary, but much ſtronger It is totally volatile, and inflammable; ſoluble in vinous ſpirits, oils, and the mineral acids; not in water, alkaline liquors, or the acids of the vegetable kingdom. This concrete is eſteemed one of the moſt efficacious diaphoretics; and has long been celebrated in fevers, malignant and epidemical diſtempers. In deliria, where opiates fail of procuring ſleep, and often aggravate the ſymptoms, this medicine frequently ſucceeds.

Frederick Hoffman has written an expreſs diſſertation *De Camphoræ uſu interno ſecuriſſimo et præſtantiſſimo.* The ſubſtance of his obſervation is, that camphor ſeems to penetrate very quickly through the whole body, and notably increaſe perſpiration: that though given to the quantity of half a dram, diſſolved in ſpirit of wine, and duly diluted, it does not raiſe the pulſe, or occaſion any heat, but rather cauſes a ſenſe of coolneſs about the præcordia: that on continuing its uſe for ſome time, the blood became ſenſibly more fluid, and the quantity of watery ſerum, with which the habit before abounded, was notably diminiſhed: that in malignant fevers, and all diſorders, whether acute or chronical, proceeding from an acrid or putreſcent ſtate of the juices, camphor has excellent effects, correcting the acrimony, expelling the putrid morbific matter through the cutaneous pores, and preventing an inflammation or ſphacelus, where there is previouſly any diſpoſition thereto: that, by ſtrengthening the veſſels, it reſtrains hæmorrhages happening in acute fevers, and promotes critical and periodical evacuations:

that it expels even the venereal virus ; and that he has known examples of the lues being cured by camphor alone, a purgative only being premiſed : and that in recent infections he has found no medicine equal to it in efficacy. In inflammatory caſes, where there is a tendency to mortification, intenſe heat, thirſt, or where the ſkin is dry and parched, whether before or after a delirium has come on, ſmall doſes of camphor joined with nitre, produced happy effects, almoſt immediately relieving the ſymptoms, occaſioning a calm ſleep and plentiful ſweat, without fatiguing the patient. He further obſerves, that this ſimple, by its antiphlogiſtic quality, prevents the ill effects of the more irritating medicines ; that cantharides, and the acrid ſtimulating cathartics and diuretics, by the admixture of a ſmall proportion of camphor, become much more mild and ſafe in operation.

The common doſe of camphor is from one grain to ten. Its officinal preparations are, a julep [*L.*] and emulſion [*E.*] for internal uſe ; and a ſolution in rectified ſpirit [*L. E.*] and in expreſſed oil [*E.*] for external applications. It is an ingredient alſo in the paregoric elixir, camphorated vitriolic water [*L.*], camphorated white ointment, and ſaponaceous liniment [*L. E.*]

CANCRORUM CHELÆ [*L. E.*] Crabs' claws : the black tips of the claws of the common ſea crab, or *cancer marinus.*

CANCRORUM OCULI *dicti* [*L. E.*] Crabs' eyes ſo called : ſtony concretions found in the head, or rather ſtomach, of the *aſtacus fluviatilis*, or craw fiſh.

The only virtue of theſe ſimples is to abſorb acidities in the primæ viæ. The claws enter an officinal lozenge, and give name to a powder, for this intention. They are ingredients alſo in ſome other officinal compoſitions, in which they do not ſeem to be of much advantage : viz. the compound arum powder, contrayerva powder, and cordial confection.

Crabs' eyes are ſaid by moſt writers on the materia medica to be frequently counterfeited with tobaccopipe clay, or compoſitions of chalk with mucilaginous ſubſtances. This piece of fraud, if really practiſed, may be very eaſily diſcovered ; the counterfeits wanting the leafy texture which is obſerved upon breaking the genuine ; more readily imbibing water ; adhering to the tongue ; and diſſolving in vinegar, or the ſtronger acids diluted with water, either entirely or not at all, or by piecemeal ; whilſt the true crabs' eyes, digeſted in theſe liquors, become ſoft and tranſparent, their original form remaining the ſame. This change happens, becauſe the earthy part, on which depended their opacity and hardneſs, is diſſolved by the gentle action of the acid, which leaves the conglutinating matter unhurt.

CANELLA ALBA : *Cinnamomum ſive canella tubis minoribus alba C. B. Cortex Winteranus falſo dictus Park.* Canella alba.

This is a bark rolled up into long quills, thicker than cinnamon, and both outwardly and inwardly of a whitiſh colour, lightly inclining to yellow. It is the produce of a tall tree growing in great plenty in the low lands in Jamaica, and other American iſlands, called by ſir Hans Sloane *arbor baccifera laurifolia aromatica, fructu viridi calyculato racemoſo.* The canella is the interior bark, freed from an outward thin rough one, and dried in the ſhade. The ſhops diſtinguiſh two ſorts of canella, differing from one another in the length and thickneſs of the quills; they are both the bark of the ſame tree, the thicker being taken from the trunk, and the thinner from the branches. This bark is a warm pungent aromatic, not of the moſt agreeable kind: nor are any of the preparations of it very grateful. It is lately ſometimes met with in extemporaneous preſcription, and is an ingredient in officinal *hiera picra* and *tinctura ſacra* [*L.*] and in the *aqua raphani* and *pulvis ari compoſitus* [*E.*]

CANNABIS *ſemen: Cannabis ſativæ C. B.* Hemp; the ſeed [*E.*]

This plant, when freſh, has a rank narcotic ſmell: the water in which the ſtalks are ſoaked, in order to facilitate the ſeparation of the tough rind for mechanic uſes, is ſaid to be violently poiſonous, and to produce its effects almoſt as ſoon as drank. The ſeeds alſo have ſome ſmell of the herb; their taſte is unctuous and ſweetiſh; on expreſſion they yield a conſiderable quantity of inſipid oil: hence they are recommended (boiled in milk, or triturated with water into an emulſion) againſt coughs, heat of urine, and the like. They are alſo ſaid to be uſeful in incontinence of urine, and for reſtraining venereal appetites; but experience does not warrant their having any virtues of this kind.

CANTHARIDES [*L. E.*] Spaniſh flies. Theſe inſects are of a ſhining green colour, intermingled with more or leſs of a blue and a gold yellow. They are found adhering to different kinds of trees and herbs, in Spain, Italy, and France; the largeſt and moſt eſteemed come from Italy.

Cantharides are extremely acrimonious: applied to the ſkin, they firſt inflame, and afterwards excoriate the part, raiſing a more perfect bliſter than any of the vegetable acrids, and occaſioning a more plentiful diſcharge of ſerum. All the bliſtering compoſitions have cantharides for the baſis. See Part IV. chap. x. The external application of cantharides is often followed by a ſtrangury, accompanied with thirſt and feveriſh heat: this inconvenience may be remedied by ſoft unctuous or mucilaginous liquors liberally drank.

Cantharides taken internally, often occaſion a diſcharge of blood by urine, with exquiſite pain: if the doſe is conſiderable, they ſeem to inflame and exulcerate the whole inteſtinal canal; the ſtools become mucous and purulent; the breath fetid and cadaverous; intenſe pains are felt in the lower belly; the patient faints, grows giddy, raving mad, and dies. All theſe terrible conſequences have ſometimes happened from a few grains. Herman relates, that he has known a quarter of a grain inflame the kidneys, and occaſion bloody urine with violent pain. There are, nevertheleſs, caſes in which this ſtimulating fly, given in larger doſes, proves not only ſafe, but of ſingular efficacy for the cure of diſeaſes that yield little to medicine of a milder claſs. In cold phlegmatic ſluggiſh habits, where the viſcera are overloaded, and the kidneys and ureters obſtructed with thick viſcid mucous matter, cantharides have excellent effects; here the abounding mucus defends the ſolids from the acrimony of the fly, till it is itſelf expelled; when the medicine ought to be diſcontinued. Groenvelt employed cantharides with great ſucceſs in dropſies, obſtinate ſuppreſſions of urine, and ulcerations of the bladder; giving very conſiderable doſes made into boluſes with camphor; and interpoſing large draughts of emulſions, milk, or other emollient liquors; by theſe means the exceſſive irritation, which they would otherwiſe have occaſioned, was in great meaſure prevented. The camphor did not perhaps contribute ſo much to this effect as is generally imagined; ſince it has no ſenſible quality that promiſes any conſiderable abatement of the acrimony of cantharides: nitre would anſwer all that the camphor is ſuppoſed to perform: this, with milk, or emollient mucilaginous liquors, drunk in large quantity, are the beſt correctors. Cantharides, in very ſmall doſes, may be given with ſafety alſo in other caſes. Dr. Mead obſerves, that the obſtinate gleetings which frequently remain after the cure of venereal maladies, and which rarely yield to balſamic medicines, are effectually remedied by cantharides; and that no one remedy is more efficacious in leprous diſorders; in which laſt, proper purgatives are to be occaſionally taken during the uſe of the cantharides. The beſt and ſafeſt preparation of cantharides for theſe purpoſes, is a ſpirituous tincture [*L. E.*] and indeed in all caſes, the tincture is far preferable, for internal uſe, to the fly in ſubſtance.

The virtues of cantharides are extracted by rectified ſpirit of wine, proof ſpirit, and water; but do not ariſe in diſtillation. The watery and ſpirituous extracts bliſter as freely as the fly in ſubſtance; whilſt the fly remaining after the ſeveral menſtrua have performed their office, is to the taſte inſipid, and does not in the leaſt bliſter or inflame the ſkin.

CAPILLIS VENERIS, vide ADIANTHUM.

CAPPARIS *radicis cortex, et florum gemmæ: Capparis ſpinoſæ fructu minore, folio rotundo C. B.* Caper buſh; the bark of the root, and buds of the flowers.

This is a low prickly buſh, found wild in Italy, and other countries; it is raiſed with us by ſowing the ſeeds upon old walls, where they take root betwixt the bricks, and endure for many years.

The bark of the root is pretty thick, of an aſh colour, with ſeveral tranſverſe wrinkles on the ſurface; cut in ſlices and laid to dry, it rolls up into quills. This bark has a bitteriſh acrid taſte: it is reckoned aperient and diuretic; and recommended in ſeveral chronic diſorders, for opening obſtructions of the viſcera.

The buds, pickled with vinegar, &c. are uſed at table. They are ſuppoſed to excite appetite, and promote digeſtion; and to be particularly uſeful, as detergents and aperients, in obſtructions of the liver and ſpleen. Their taſte and virtues depend more upon the ſaline matter introduced into them, than on the caper buds.

CAPSICUM, vide PIPER INDICUM.

CARABE, vide SUCCINUM.

* CARDAMINES FLORES: *Naſturtii pratenſis magno flore C. B. Cardamines pratenſis Lin.* Ladies-ſmock, or cuckow flower. This is a plant in taſte reſembling creſs. It has an erect ſtalk; and leaves ſet in pairs on a middle rib, with an odd one at the end. Its flower is white or purpliſh, and is ſucceeded by a bivalvular pod. It grows in plenty in moiſt low meadows, and flowers early in the ſpring.

The virtue of the flowers of ladies-ſmock, in hyſteric and epileptic caſes, was firſt noticed by Ray; and their uſe has been revived by Sir George Baker, who has publiſhed ſome caſes of their efficacy in the Med. Tranſ. vol. i. The flowers are to be finely powdered, after having been properly dried, and given in doſes of from one ſcruple, to one dram and an half.

CARDAMOMI MAJORIS *ſemen. Amomi cardamomi Lin.* Greater cardamom ſeed.

The greater cardamom is a dried fruit or pod, about an inch long, containing under a thick ſkin two rows of ſmall triangular ſeeds of a warm aromatic flavour.

CARDAMOMI MINORIS *ſemen.* Leſſer cardamom. [*L. E.*]

This fruit is ſcarce half the length of the foregoing; the ſeeds are conſiderably ſtronger both in ſmell and taſte. Hence this ſort has long ſupplied the place of the other in the ſhops, and is the only one now directed.

Cardamom ſeeds are a very warm, grateful, pungent aromatic, and frequently employed as ſuch in practice: they are ſaid to have this advantage, that notwithſtanding their pungency, they do not, like thoſe of the pepper kind, immoderately heat or inflame the bowels. Both water and rectified ſpirit extract their virtues by infuſion, and elevate them in diſtillation; with this difference, that the tincture and diſtilled ſpirit are conſiderably more grateful than the infuſion and diſtilled water: the watery infuſion appears turbid and mucilaginous; the tincture made in ſpirit, limpid and tranſparent. The huſks of the ſeeds, which have very little ſmell or taſte, may be commodiouſly ſeparated, by committing the whole to the mortar, when the ſeed will readily pulverize, ſo as to be freed from the ſhell by the ſieve: this ſhould not be done till juſt before uſing them; for if kept without the huſks, they ſoon loſe much of their flavour.—The officinal preparations of theſe ſeeds are a ſpirituous water and tincture: they are employed alſo as a ſpicy ingredient in ſeveral of the officinal compoſitions.

CARDIACÆ *folia: Marubii cardiacæ dicti, forte primi Theophraſti C. B. Leonuri Cardiacæ Lin.* Motherwort; the leaves.

This plant is common in waſte places, and found in flower during the greateſt part of the ſummer. The leaves have a bitter taſte, and a pretty ſtrong ſmell; they are ſuppoſed to be uſeful in hyſteric diſorders, to ſtrengthen the ſtomach, to promote urine; and indeed it may be judged from their ſmell and taſte, that their medicinal virtues are conſiderable, though they are now rejected both from the London and Edinburgh pharmacopœias.

CARDUI BENEDICTI *folia ſemen: Cnici ſylveſtris hirſutioris ſive cardui benedicti C. B. Cardui lutei procumbentis, ſudorifici et amari Moriſon. Centaureæ benedictæ Lin.* Bleſſed thiſtle; the leaves [*L. E.*] and ſeed [*E.*]

This is an annual plant, cultivated in gardens: it flowers in June and July, and perfects its ſeeds in the autumn. The herb ſhould be gathered when in flower, dried in the ſhade, and kept in a very dry airy place, to prevent its rotting or growing mouldy, which it is very apt to do. The leaves have a penetrating bitter taſte, not very ſtrong, or very durable; accompanied with an ungrateful flavour, from which they are in great meaſure freed by keeping. Water extracts, in a little time, even without heat, the lighter and more grateful parts of this plant; if the digeſtion be continued for ſome hours, the diſagreeable parts are taken up; a ſtrong decoction is very nauſeous and offenſive to the ſtomach. Rectified ſpirit gains a very pleaſant bitter taſte, which remains uninjured in the extract.

The virtues of this plant ſeem to be little known in the preſent practice. The nauſeous decoction is ſometimes uſed to provoke vomiting; and a ſtrong infuſion to promote the operation of other emetics. But this elegant bitter, when freed from the offenſive parts of the herb, may be advantageouſly applied to other purpoſes. I have frequently experienced excellent effects from a light infuſion of carduus in loſs of appetite, where the ſtomach was injured by irregularities. A ſtronger infuſion made in cold or warm water, if drunk freely, and the patient kept warm, occaſions a plentiful ſweat, and promotes all the ſecretions in general.

The ſeeds of this plant are alſo conſiderably bitter, and have been ſometimes uſed in the ſame intention as the leaves. The Edinburgh college makes them an ingredient in the ſtomachic tincture.

CARICÆ [*L.E.*] Figs; the dried fruit of the *ficus communis C. B.*

The principal uſe of theſe is as a ſoft emollient ſweet. In this intention they enter the pectoral decoction and lenitive electary of the ſhops. They are alſo eſteemed by ſome as ſuppuratives, and hence have a place in the maturating cataplaſm.

CARPOBALSAMUM: *Fructus balſami Syriaci rutæ folio. C. B.* Carpobalſam [*L.*]

This is the fruit of the tree that yields the opobalſam or balm of Gilead. It is about the ſize of a pea, of a whitiſh colour, incloſed in a dark brown wrinkled bark. This fruit, when in perfection, has a pleaſant warm glowing taſte, and a fragant ſmell, reſembling that of the opobalſam itſelf. It is very rarely found in the ſhops; and ſuch as we now and then do meet with, has almoſt entirely loſt its ſmell and taſte. It is of no other uſe in this country than as an ingredient in the mithridate and theriaca, in both which the college direct cubebs as a ſubſtitute to it.

CARTHAMI *ſemen: Cartami officinarum flore croceo Tourn. Carthami tinctorii Lin.* Baſtard ſaffron, or ſafflower; the ſeeds.

The baſtard ſaffron is a ſoft kind of thiſtle, with only a few prickles about the edges of the leaves. It is cultivated in large quantity in ſome places of Germany; whence the other parts of Europe are ſupplied with the flowers as a colouring drug, and the ſeeds as a medicinal one. The flowers, well cured, are not eaſily diſtinguiſhable by the eye from ſaffron; but their want of ſmell readily diſcovers them. The ſeeds are white, ſmooth, of an oblong roundiſh ſhape, yet with four ſenſible corners, about a quarter of an inch in length, ſo heavy as to ſink in water; of a viſcid ſweetiſh taſte, which in a little time becomes acrid and nauſeous. Theſe ſeeds have been celebrated as a cathartic: they operate very ſlowly, and for the moſt part diſorder the bowels, eſpecially when given in ſubſtance; triturated with aromatic diſtilled waters, they form an emulſion leſs offenſive, yet inferior in efficacy to more common purgatives.

CARUI, *carvi, ſeu cari, ſemen: Cumini*

Cumini pratenſis carui officinarum C. B. Caraway; the ſeeds [*L. E.*]

Caraway is an umbelliferous plant, cultivated with us in gardens, both for culinary and medicinal uſe. The ſeeds have an aromatic ſmell, and a warm pungent taſte. Theſe are in the number of the four greater hot ſeeds; and frequently employed as a ſtomachic and carminative in flatulent colics, and the like. Their officinal preparations are an eſſential oil [*L. E.*] and a ſpirituous water [*L.*] they are ingredients alſo in the compound juniper water, tincture of ſena, ſtomachic tincture, oxymel of garlic, electary of bayberries and of ſcammony, philonium, and the cummin ſeed plaſter [*L.*]

CARYOPHYLLA AROMATICA [*L. E.*] Cloves.

Cloves are the flower-cups (not, as is generally ſuppoſed, the fruit) of a bay-like tree, growing in the Eaſt-Indies. In ſhape, they ſomewhat reſemble a ſhort thick nail: in the inſide of each clove are found a ſtylus and ſtamina with their apices, as in other flower-cups: at the larger end ſhoot out from the four angles four little points like a ſtar, in the middle of which is a round ball, compoſed of four little leaves, which are the unexpanded petals of the flower.

Cloves have a very ſtrong agreeable aromatic ſmell, and a bitteriſh pungent taſte, almoſt burning the mouth and fauces. The Dutch, from whom we have this ſpice, frequently mix it with cloves which have been robbed of their oil: theſe, though in time they regain from the others a conſiderable ſhare both of taſte and ſmell, are eaſily diſtinguiſhable by their weaker flavour and lighter colour. Cloves, conſidered as medicines, are very hot ſtimulating aromatics, and poſſeſs, in an eminent degree, the general virtues of ſubſtances of this claſs. An extract made from them with rectified ſpirit is exceſſively hot and pungent; the diſtilled oil has no great pungency; an extract made with water is nauſeous and ſomewhat ſtyptic. The only officinal preparation of them is the eſſential oil [*L. E.*] Both the cloves themſelves and their oil are ingredients in many officinal compoſitions.

CARYOPHYLLA RUBRA: *Flores Caryophylli altilis majoris C. B. Dianthi caryophylli Lin.* Clove July flowers [*L. E.*]

A great variety of theſe flowers are met with in our gardens. Thoſe made uſe of in medicine ought to be of a deep crimſon colour, and a pleaſant aromatic ſmell, ſomewhat like that of cloves: many ſorts have ſcarce any ſmell at all. The *caryophylla rubra* are ſaid to be cardiac and alexipharmac. Simon Paulli relates, that he has cured many malignant fevers by the uſe of a decoction of them; which he ſays powerfully promotes ſweat and urine, without greatly irritating nature, and alſo raiſes the ſpirits, and quenches thirſt. At preſent the flowers are chiefly valued for their pleaſant flavour, which is entirely loſt even by light coction; hence the college direct the ſyrup, which is the only officinal preparation of them, to be made by infuſion.

CARYOPHYLLATÆ *radix*: *Caryophyllatæ vulgari flore parvo luteo J. B. Gei urbani Lin.* Avens, or herb benet; the root.

Avens is a rough plant found wild in woods and hedges. The root has a warm, bitteriſh, aſtringent taſte, and a pleaſant ſmell, ſomewhat of the clove kind, eſpecially in the ſpring, and when produced in dry warm ſoils. Parkinſon obſerves, that in the growth of moiſt ſoils it has nothing of this flavour. This root has been employed as a ſtomachic, and for ſtrengthening the tone of the viſcera in general: it is ſtill in ſome eſteem in foreign countries, though not taken notice of among us. It yields, on diſtillation, an elegant odoriferous eſſential oil, which concretes into a flaky form.

CASCARILIA, vide ELEUTHERIA.

CASIA FISTULARIS *Caſſia fiſtula Alexandrina Lin.* [*L. E.*] the fruit of an oriental tree, reſembling the walnut.

This fruit is a cylindrical pod, ſcarce an inch in diameter, a foot or more in length: the outſide is a hard brown bark; the inſide is divided by thin tranſverſe woody plates, covered with a ſoft black pulp of a ſweetiſh taſte, with ſome degree of acrimony. There are two ſorts of this drug in the ſhops; one brought from the Eaſt-Indies, the other from the Weſt: the canes or pods of the latter are generally large, rough, thick-rinded, and the pulp nauſeous; thoſe of the former are leſs, ſmoother, the pulp blacker, and of a ſweeter taſte; this ſort is preferred to the other. Such pods ſhould be choſen as are weighty, new, and do not make a rattling noiſe (from the ſeeds being looſe within them) when ſhaken. The pulp ſhould be of a bright ſhining black colour, and a ſweet taſte, not harſh (which happens from the fruit being gathered before it is grown fully ripe) or ſouriſh (which it is apt to turn upon keeping). It ſhould neither be too dry, nor too moiſt, nor at all mouldy, which, from its being kept in damp cellars, or moiſtened, in order to increaſe it's weight, it is very ſubject to be. Greateſt part of the pulp diſſolves both in water and in rectified ſpirit; and may be extracted from the cane by either. The ſhops employ water, boiling the bruiſed pod therein, and afterwards evaporating the ſolution to a due conſiſtence.

The pulp of caſia is a gentle laxative medicine, and frequently given, in a doſe of ſome drams, in coſtive habits. Some direct a doſe of two ounces or more as a cathartic, in inflammatory caſes, where the more acrid purgatives have no place: but in theſe large quantities it generally nauſeates the ſtomach, produces flatulencies, and ſometimes gripings of the bowels, eſpecially if the caſia is not of a very good kind; theſe effects may be prevented by the addition of aromatics, and exhibiting it in a liquid form. Geoffroy ſays, it does excellent ſervice in the painful tenſion of the belly, which ſometimes follows the imprudent uſe of antimonials; and that it may be advantageouſly acuated with the more acrid purgatives, or antimonial emetics, or employed to abate their force. Vallifnieri relates, that the purgative virtue of this medicine is remarkably promoted by manna; that a mixture of four drams of caſia, and two of manna, purges as much as twelve drams of caſia, or thirty-two of manna alone. Sennertus obſerves, that the urine is apt to be turned of a green colour by the uſe of caſia: and ſometimes, where a large quantity has been taken, blackiſh. This drug gives name to an officinal electary, and is an ingredient alſo in another.

CASIA LIGNEA: the bark of an Indian tree, called by Breynius *arbor canellifera Indica, cortice acerrimo*

rimo viſcido ſeu mucilaginoſo, qui caſſia lignea officinarum. Laurus Caſſia Lin.

This bark, in appearance and aromatic flavour, approaches to cinnamon; from which it is eaſily diſtinguiſhable by its remarkable viſcidity: chewed, it ſeems to diſſolve in the mouth into a ſlimy ſubſtance; boiled in water, it gives a ſtrong mucilage, the aromatic part exhaling; the water obtained by diſtillation, unleſs drawn with great care, has an unpleaſant ſmell, ſomewhat of the empyreumatic kind: nevertheleſs the diſtilled oil proves nearly of the ſame quality with that of cinnamon. Caſſia poſſeſſes the aromatic virtues of cinnamon; but in an inferior degree; and its effects are leſs durable. Its glutinous quality renders it uſeful in ſome caſes where ſimple aromatics are leſs proper.

CASTOREUM [*L. E.*] Caſtor.

Caſtor is the inguinal glands of the beaver; a four-footed amphibious animal, frequent in ſeveral parts of Europe and America. The beſt comes from Ruſſia: this is in large round hard cods, which appear, when cut, full of a brittle red liver-coloured ſubſtance, interſperſed with membranes and fibres exquiſitely interwoven. An inferior ſort is brought from Dantzick; this is generally fat and moiſt. The worſt of all is that of New England, which is in longiſh thin cods.

Ruſſia caſtor has a ſtrong diſagreeable ſmell, and an acrid, biting, bitteriſh nauſeous taſte. Water extracts the nauſeous part, with little of the finer bitter; rectified ſpirit extracts this laſt, without much of the nauſeous; proof ſpirit both; water elevates the whole of its flavour in diſtillation; rectified ſpirit brings over nothing.

Caſtor is looked upon as one of the capital nervine and antihyſteric medicines: ſome celebrated practitioners have nevertheleſs doubted its virtues; and Neumann and Stahl declare it inſignificant. Experience, however, has ſhown, that the virtues of caſtor are conſiderable, though they are certainly far leſs than they have been generally ſuppoſed to be. Its officinal preparations are a ſimple water [*L.*] a ſpirituous tincture [*L. E.*] and a tincture in the volatile oily ſpirit [*E.*] It is an ingredient in many other compoſitions, as the compound elixir and powder of myrrh [*L.*] the fetid pills, gum-pills, and powder for promoting delivery [*E.*]

CASUMUNAR [*L. E.*]

This is a tuberous root, an inch or more in thickneſs, marked on the ſurface with circles or joints like galangal, of a browniſh or aſh colour on the outſide, and duſky yellowiſh within; it is brought from the Eaſt-Indies, cut into tranſverſe ſlices: what kind of plant it produces, is not known.

Caſumunar has a warm bitteriſh taſte, and an aromatic ſmell, ſomewhat reſembling that of ginger. It has been celebrated in hyſteric caſes, epilepſies, palſies, loſs of memory, and other diſorders. The preſent practice ſometimes employs it as a ſtomachic and carminative, but it is not ſo much uſed or known as it deſerves to be.

CAUDA EQUINA, *ſeu Equiſetum: Equiſetum paluſtre longioribus ſetis C. B. Hippuris vulg. Lin.* Horſetail; the herb [*E.*]

This plant is common in watery places. It is ſaid to be a very ſtrong aſtringent: it has indeed a manifeſt aſtringency, but in a very low degree.

CENTAURII MAJORIS, *ſeu Rhapontici vulgaris radix: Centaurii majoris folio in lacinias plures diviſo C. B. Centaureæ Centaurei Lin.* Greater centaury; the root.

The greater centaury is a large plant, cultivated in gardens. The root has a rough ſomewhat acrid taſte, and abounds with a red viſcid juice; its rough taſte has gained it ſome eſteem as an aſtringent; its acrimony as an aperient; and its glutinous quality as a vulnerary: the preſent practice takes little notice of it,

CENTAURII MINORIS *ſummitates: Centaurii minoris flore purpureo J. B. Gentianæ Centaurei Lin.* Leſſer centaury; the tops [*L. E.*]

This grows wild in many parts of England, in dry paſture grounds, and amongſt corn. The tops are an uſeful aperient bitter: the Edinburgh pharmacopœia directs an extract to be prepared from them, and employs them as an ingredient in the bitter infuſion and ſtomachic tincture.

CEPA [*L. E.*]: *Cepa vulgaris C. B.* Onions.

Onions differ from other bulbous rooted plants, in having ſingle roots, or ſuch as cannot be parted ſo as to increaſe the plant. Theſe roots are conſidered rather as articles of food than of medicine: they are ſuppoſed to afford little or no nouriſhment, and when eaten liberally produce flatulencies, occaſion thirſt, headachs and turbulent dreams: in cold phlegmatic habits, where viſcid mucus abounds, they doubtleſs have their uſe; as by their ſtimulating quality they tend to excite appetite, attenuate thick juices, and promote their expulſion; by ſome they are ſtrongly recommended in ſuppreſſions of urine and in dropſies. The chief medicinal uſe of onions in the preſent practice is in external applications, as a cataplaſm for ſuppurating tumours, &c. They are an ingredient in the *cataplaſma ſuppurans* [*E.*]

CERA FLAVA [*L. E.*] Yellow bees wax.

This is a ſolid concrete, obtained from the honeycombs after the honey is taken, by heating and preſsing them betwixt iron plates. The beſt ſort is of a lively yellow colour, and an agreeable ſmell, ſomewhat like that of honey; when new it is toughiſh, yet eaſy to break; by age it becomes harder and more brittle, it loſes its fine colour, and in great meaſure its ſmell.

CERA ALBA [*L. E.*]—White wax is prepared from the yellow, by reducing it into thin flakes, and expoſing it for a length of time to the air; when ſufficiently bleached, it is melted, and caſt into cakes. The beſt ſort is of a clear and almoſt tranſparent whiteneſs, and of a light agreeable ſmell like that of the yellow wax, but much weaker.

The chief medical uſe of wax is in cerates, plaſters, unguents, &c. as an emollient for promoting ſuppuration, &c. It readily unites with oils and animal fats, but not with watery or ſpirituous liquors. It is given alſo internally in diarrhœas, dyſenteries, &c. either mixed with oily ſubſtances, as in the *balſamum Locatelli* [*L. E.*] or divided by earthy powders, as in the *pulvis teſtaceus ceratus* [*E.*]

CERASA: *Fructus Ceraſi majoris et ſylveſtris, fructu ſubdulci, nigro colore inficiente C. B. et Ceraſi ſativæ, fructu rotundo rubro et acido Tourn. et Ceraſa acidiſſima ſanguineo ſucco C. B.* The ſweet cherry with a black juice; the pleaſantly ſouriſh cherry, with a colourleſs juice; and the very ſour cherry, with a blood red juice; commonly called black, red, and morello cherries.

Theſe fruits, eſpecially the acid ſorts, are very uſeful and agreeable coolers and quenchers of thirſt; and are ſometimes directed in this intention, in hot bilious, or febrile diſtempers. Boerhaave was extremely fond of theſe and the other fruits called *horæi*, as aperients in ſome chronic caſes; and declares himſelf perſuaded, that there is no kind of obſtruction of the viſcera capable of being removed by medicine, which will not yield to the continued uſe of theſe.

CERUSSA [*L. E.*] Ceruſſe, or white lead.

This is prepared by expoſing lead to the ſteam of vegetable acids till it is corroded into a white powdery ſubſtance. It is ſometimes adulterated with a mixture of common whiting; this, if in any conſiderable quantity, may be eaſily diſcovered by the ſpecific lightneſs of the compound: the ſort called flake lead is not ſubject to abuſe. See the article Plumbum; and *Ceruſſa* in the third part.

CETERACH: *Ceterach officinarum C. B. Aſplenium Ceterach Lin.* Spleenwort, or miltwaſte.

This is a ſmall buſhy plant, growing upon rocks and old walls. It has an herbaceous, ſomewhat mucilaginous, roughiſh taſte: it is recommended as a pectoral and for promoting urine in nephritic caſes. The virtue for which it has been moſt celebrated, is that to which it has the leaſt title, diminiſhing the ſpleen.

CHÆREFOLII *folia: Chærophylli ſativi C. B. Scandicis Chærefolii Lin.* Chervil; the leaves [*E.*]

This is a low annual plant ſomewhat like parſley, commonly cultivated in gardens for culinary purpoſes. This plant is grateful both to the palate and ſtomach, gently aperient, and diuretic. Geoffroy aſſures us, that he has found it from experience to be of excellent ſervice in dropſies: that, in this diſorder, it promotes the diſcharge of urine when ſuppreſſed; renders it clear, when feculent and turbid; and when high and fiery, of a paler colour; that it acts mildly without irritation, and tends rather to allay than excite inflammation. He goes ſo far as to ſay, that dropſies which do not yield to this medicine, are ſcarce capable of being cured by any other. He directs the juice to be given in a doſe of three or four ounces every fourth hour, and continued for ſome time, either alone, or in conjunction with nitre and ſyrup of the five opening roots.

CHALYBS, vide Ferrum.

CHAMÆCYPARISSUS, vide Abrotanum foemina.

CHAMÆDRYOS, *ſeu Triſſaginis folia et ſummitates cum ſemine: Chamædryos minoris repentis C. B. Tucrii Chamædryos Lin.* Germander; the leaves [*E.*] and tops with the ſeed [*L.*]

This is a low ſhrubby plant, cultivated in gardens. The leaves, tops, and ſeeds have a bitter taſte, with ſome degree of aſtringency and aromatic flavour. They are recommended as ſudorific, diuretic, and emmenagogue, and for ſtrengthening the ſtomach and viſcera in general. With ſome they have been in great eſteem in intermittent fevers; as alſo in ſcrophulous and other chronic diſorders.

CHAMÆLEON ALBUS, vide Carlina.

CHAMÆMELI *folia, flores: Chamæmeli nobilis ſeu leucanthemi odoratioris C. B. Anthemis nobilis Lin.* Single-flowered chamomile (the trailing ſort with larger leaves and flowers, and the diſk of the flower not very convex) the leaves and flowers [*L. E.*]

Theſe have a ſtrong not ungrateful aromatic ſmell, and a very bitter nauſeous taſte. They are accounted carminative, aperient, emollient, and in ſome meaſure anodyne: and ſtand recommended in flatulent colics, for promoting the uterine purgations, in ſpaſmodic pains, and the pains of child-bed women: ſometimes they have been employed in intermittent fevers, and the nephritis. Theſe flowers are frequently alſo uſed externally in diſcutient and antiſeptic fomentations, and in emollient glyſters: they enter the *fotus communis*, *decoctum commune pro clyſtere* and *oleum viride* of our diſpenſatory: an eſſential oil [*L.*] ſimple water, and extract [*E.*] are likewiſe prepared from them in the ſhops.

CHAMÆMELUM *flore multiplici C. B.* Double-flowered chamomile; the flowers.

Theſe differ from the foregoing in having ſeveral rows of the white petala ſet thick together about the middle diſk, which is much ſmaller. In this diſk the medicinal qualities of the flower chiefly reſide; and hence the double or ſmall diſked ſort is inferior in efficacy to the ſingle.

CHAMÆPITYOS *ſive Ivæ arthriticæ folia: Chamæpityos luteæ vulgaris ſive folio trifido C. B. Teucrii Chamæpityos Lin.* Ground pine; the leaves.

This is a low hairy plant, clammy to the touch, and of a ſtrong aromatic reſinous ſmell, and a bitter roughiſh taſte. It is recommended as an aperient and vulnerary, as alſo in gouty and rheumatic pains.

CHELIDONII MAJORIS *folia, radix: Chelidonii majoris vulgaris C. B.* Celandine; the leaves and root [*E.*]

This plant grows upon old walls, among rubbiſh, and in waſte ſhady places. The herb is of a blueiſh green colour; the root of a deep red; both contain a gold-coloured juice; their ſmell is diſagreeable; the taſte ſomewhat bitteriſh, very acrid, biting and burning the mouth; the root is the moſt acrid. Juice of celandine has long been celebrated in diſorders of the eyes; but it is greatly too ſharp, unleſs plentifully diluted, to be applied with ſafety to that tender organ. It has been ſometimes uſed, and it is ſaid with good ſucceſs, for extirpating warts, cleanſing old ulcers, and in cataplaſms for the herpes miliaris. This acrimonious plant is rarely given internally; the virtues attributed to it are thoſe of a ſtimulating aperient, diuretic, and ſudorific: it is particularly recommended in the ſlow kind of jaundice, where there are no ſymptoms of inflammation, and in dropſies; ſome ſuppoſe the root to have been Helmont's ſpecific in the hydrops aſcites. Half a dram or a dram of the dry root is directed for a doſe; or an infuſion in wine of an ounce of the freſh root. The root and leaves are an ingredient in the icterial decoction of the Edinburgh pharmacopœia.

CHELIDONII MINORIS *folia, radix: Chelidonæ rotundifoliæ minoris C. B. Ranunculi Ficariæ Lin.* Pilewort; the leaves and root [*E.*]

This is a very ſmall plant, found in moiſt meadows and by hedge-ſides: the roots conſiſt of ſlender fibres, with ſome little tubercles among them, which are ſuppoſed to reſemble the hæmorrhoids; whence it has been concluded, that this root muſt needs be of wonderful efficacy for the cure of that diſtemper: to the taſte, it is little other than mucilaginous.

CHERMES, vide KERMES.

CHINÆ *radix.* China root [*E.*] There are two ſorts of this root in the ſhops, one brought from the Eaſt Indies, *(Smilax China Lin.)* the other from the Weſt, *(Smilax Pſeudo-China Lin.)* They are both longiſh, full of joints, of a pale reddiſh colour, of no ſmell, and very little taſte: the oriental, which is the more eſteemed, is conſiderably harder and paler coloured than the other. Such ſhould be choſen as is freſh, cloſe, heavy, and upon being chewed appears full of a fat unctuous juice. China root was either unknown or diſregarded by the ancient phyſicians. It was firſt introduced into Europe about the year 1535, with the character of a ſpecific againſt venereal and cutaneous diſorders, and as ſuch was made uſe of for ſome time, but at length gave place to medicines of a more powerful kind. It is generally ſuppoſed to promote inſenſible perſpiration and the urinary diſcharge; and by its unctuous quality to obtund acrimonious juices.

CHINA CHINÆ, vide PERUVIANUS CORTEX,

CHICHOREI *folia, radix: Cichorei ſylveſtris ſive officinarum C. B. Cichorii Intybi Lin.* Wild ſuccory; the roots and leaves [*E.*]

The root has a moderately bitter taſte, with ſome degree of roughneſs; the leaves are ſomewhat leſs bitter: the roots, ſtalks, and leaves yield, on being wounded, a milky ſaponaceous juice. By culture this plant loſes its green colour and its bitterneſs, and in this ſtate is employed in ſalads: the darker coloured, and more deeply jagged the leaves, the bitterer is their taſte. Wild ſuccory is an uſeful detergent, aperient, and attenuating medicine, acting without much irritation, tending rather to cool than to heat the body, and, at the ſame time, corroborating the tone of the inteſtines. The juice taken in large quantities, ſo as to keep up a gentle diarrhœa, and continued for ſome weeks, has been found to produce excellent effects in ſcorbutic and other chronical diſorders.

CICUTÆ *folia: Cicutæ majoris C. B. Conii maculati Lin.* Hemlock; the leaves [*E.*]

This is a large umbelliferous plant, common about the ſides of fields, under hedges, and in moiſt ſhady places: the leaves are winged, divided into a great number of ſmall fern-like ſections, of a dark or blackiſh green colour, and appearing as it were rough: the ſtalk is hollow (as is likewiſe great part of the root after the ſtalk has ariſen) and ſpotted with ſeveral blackiſh, red, or purple ſpots. Hemlock is ſometimes applied externally as a diſcutient, and in this intention is an ingredient in one of the plaſters of the Edinburgh pharmacopœia. With regard to its virtue when taken internally, it has been generally accounted poiſonous, which it doubtleſs is, in a high degree, when uſed in any conſiderable quantity. But Dr. Storck has found, that in certain ſmall doſes it may be taken with great ſafety, and that, without at all diſordering the conſtitution, or even producing any ſenſible operation, it ſometimes proves a powerful reſolvent in many obſtinate diſorders. See *Extractum cicutæ* in the third part of this work.

* CINCHONÆ CORTEX: *Cinchonæ Carribææ L. Cinchonæ Jamaicenſis* Dris Wright, Phil. Tranſ. Vol. LXXVII. Part 2.

This is a ſpecies of the jeſuit's bark, the product of Jamaica and the Carribee iſlands. This tree, called by the natives the ſea-ſide beech, grows to the height of from twenty to forty feet. The outer bark of theſe trees is white, furrowed, and very thick. This is inert, and may be knocked off from the inner, which is of a dark brown colour. Its flavour is at firſt ſweet, with a mixture of the taſte of horſe-radiſh and of the eaſtern aromatics; but when ſwallowed, it has that very bitterneſs and aſtringency which characterize the Peruvian bark. It yields its virtues both to cold and warm water; and a decoction of half an ounce of it, boiled in a quart of water to the conſumption of a pint, proved as ſtrong as a decoction of an ounce and an half of the true bark. With the addition of orange peel it makes an elegant and grateful bitter tincture. It has been given in London in an intermittent, and effected a cure as completely as the Peruvian bark.

CINERES RUSSICI. Ruſſian potaſh [*L.*]

Potaſh is an impure alkaline ſalt, produced from vegetable matters by burning. The ſtrongeſt is brought from Ruſſia, in dark coloured very hard maſſes, which do not ſoon deliquiate in the air, like the purer alkaline ſalts. This ſort is ſaid to be prepared by burning wood with a cloſe ſmothering heat, and making the aſhes, with a ley drawn from the coarſer part of them, into a paſte, which is afterwards ſtratified with ſome of the more inflammable kinds of wood, and burnt a ſecond time: by theſe means the ſalt melts, and concretes with the earthy matter of the aſhes into hard cakes: but it appears from experiment, that this kind of potaſh contains, beſides the vegetable earth, a large proportion of quicklime. A purer and whiter ſalt is brought to us from Germany, under the name of pearl aſhes: this is extracted from wood aſhes by means of water, and afterwards reduced into a dry form by evaporation. Theſe ſalts are liable to great abuſes from ſundry admixtures, and therefore ſhould never be employed for medicinal purpoſes, without due purification: this may be effected by ſolution in cold water, filtration, and exſiccation. See Part III. chap viii.

CINABARIS NATIVA. Native cinnabar [*E.*]

This is a ponderous mineral of a red colour, found in Spain, Hungary, and ſeveral other parts of the world. The fineſt ſort is in pretty large maſſes, both externally and internally of an elegant deep red colour, which greatly improves upon grinding the maſs into fine powder; this is imported by the Dutch from the Eaſt-Indies. There is another ſort of a good colour, in roundiſh drops, ſmooth without, and ſtriated within.

This mineral appears from chemical experiments to be compoſed of mercury and ſulphur, in ſuch a manner, that the quantity of the former is commonly above ſix times greater than that of the latter: the finer the colour of the cinnabar, the more mercury it is found to hold. Native cinnabar has been by many preferred as a medicine to that made by art: but there does not appear to be any juſt foundation for this preference. The native has ſometimes been obſerved to occaſion nauſeæ, vomiting, and anxiety: theſe probably proceeded from an admixture of ſome arſenical particles from which it could not be freed by repeated ablution. When pure, it has no quality or medical virtue diſtinct from thoſe of the artificial cinnabar, like which it is not diſſolable in the animal fluids, and is commonly found of little activity. See part III. chap. iv. ſect. 7.

CINNAMOMUM: *Cinnamomum ſive cannella Zeylanica C. B. Laurus Cinnamomum Lin.* Cinnamon [*E.*]

This is a light thin bark of a reddiſh colour, rolled up in long quills or canes; of a fragrant, delightful ſmell, and an aromatic, ſweet, pungent taſte, with ſome degree of aſtringency. It is generally mixed with the caſia bark: this latter is eaſily diſtinguiſhable by its breaking over ſmooth, whilſt cinnamon ſplinters; and by its ſlimy mucilaginous taſte, without any thing of the roughneſs of the true cinnamon. Cinnamon is a very elegant and uſeful aromatic, more grateful both to the palate and ſtomach, than moſt other ſubſtances of this claſs: by its aſtringent quality it likewiſe corroborates the viſcera, and proves of great ſervice in ſeveral kinds of alvine fluxes, and immoderate diſcharges from the uterus. An eſſential oil, a ſimple and ſpirituous diſtilled water, and a tincture of it, are kept in the ſhops: it is likewiſe employed as a ſpicy ingredient in a great number of compoſitions.

CITREORUM *cortex et ſuccus: Fructus mali medicæ C. B. Citreorum medicæ Lin.* Citrons; the yellow rind and juice [*E.*]

The citron is an evergreen tree or ſhrub, of the ſame genus with the orange and lemon: it was firſt brought from Aſſyria and Media (whence the fruit is called *mala Aſſyria, mala Medica)* into Greece, and thence into the ſouthern parts of Europe, where it is now cultivated. Citrons are rarely made uſe of among us: they are of the ſame quality with lemons, except that their juice is ſomewhat leſs acid.

CITRULLI *ſemen: Anguriæ Citrulli dictæ C. B. Cucurbitæ Citrulli Lin.* Citruls: the ſeed [*E.*]

This plant is rarely met with among us, unleſs in botanic gardens. The ſeeds are in the number of the four greater cold ſeeds, and agree in quality with the others of that claſs.

CNICUS, vide CARTHAMUS.

COCCINELLA, *ſeu Cochinilla:* Cochineal [*L. E.*]

This is a ſmall irregular roundiſh body, of a dark red colour on the outſide, and deep bright red within: it is brought from Mexico and New Spain. This ſubſtance has long been ſuppoſed to be the ſeed of a plant: but it appears, from chemical experiments, to be an animal, and from the accounts of the more celebrated naturaliſts, an inſect, which breeds on the American prickly pear-tree, and adheres to it without changing its place. Cochineal has been ſtrongly recommended as a ſudorific, cardiac, and alexipharmac; but practitioners have never obſerved any conſiderable effects from it. Its greateſt conſumption is among the ſcarlet dyers; and in medicine its principal uſe is as a colouring drug: both watry and ſpirituous liquors extract its colour. In the London pharmacopœia three tinctures, in the Edinburgh eight, with two decoctions, an infuſion and a confection,

tion, receive from this drug a fine red colour.

COCHLEÆ TERRESTRES, vide LIMACES TERRESTRES.

COCHLEARIÆ HORTENSIS *folia: Cochleariæ folio ſubrotundo C. B. Cochleariæ officinalis Lin.* Garden ſcurvy-graſs; the leaves [*L. E.*]

COCHLEARIÆ MARINÆ *folia: Cochleariæ folio ſinuato C. B. Cochleariæ anglicæ Lin.* Sea ſcurvy-graſs; the leaves.

Theſe plants have little other difference, as to their external appearance, than that expreſſed in their titles: in taſte and medical virtue, the former is conſiderably the ſtronger; and hence is alone retained both by the London and Edinburgh colleges.

Scurvygraſs is a pungent ſtimulating medicine; capable of diſſolving viſcid juices, opening obſtructions of the viſcera and the more diſtant glands, and promoting the fluid ſecretions: it is particularly celebrated in ſcurvies, and is the principal herb employed in theſe kinds of diſorders in the northern countries. Its officinal preparations are a conſerve [*L. E.*] and ſpirit [*E.*]: it is an ingredient alſo in the ſcorbutic juices and compound horſe-radiſh-water [*L. E.*], and its ſpirit is uſed for drawing a tincture from gum lac [*E.*]

COFFEA [*E.*] Coffee: the fruit of an oriental ſhrub called by Juſſieu *jaſminum Arabicum lauri folio, cujus ſemen apud nos caffé dicitur.*

This fruit is employed rather as food than as a medicine. The medical effects expected from it, are to aſſiſt digeſtion, promote the natural ſecretions, and prevent or remove a diſpoſition to ſleepineſs.

* COLCHICUM: *Colchicum autumnale Stœrck. & Lin. Colchicum commune C. B.* Meadow Saffron: a plant growing in rich moiſt meadow grounds in the ſouthern and weſtern parts of England. It has a bulbous root, producing from the lower part a ſmaller bulb; from this laſt ariſes, in autumn, along a furrow in the ſide of the old root, a ſlender hollow tranſparent pedicle, widening at top into a flower like thoſe of crocuſes, of a purpliſh or whitiſh colour: from the ſame root, next ſpring, come forth three or four upright leaves, like thoſe of the lily; in the middle of which appear, on ſhort pedicles, three triangular pods, about the ſize of ſmall walnuts, divided into three cells full of roundiſh dark-coloured ſeeds. The roots, freed from the outer blackiſh coat and the fibres at bottom, are, while freſh, of a white colour, and full of a milky juice.

This is one of thoſe plants, whoſe violent and ſingular effects engaged the attention of Dr. Stœrck. He obſerves, that on cutting the freſh root into ſlices, the acrid particles emitted from it irritate the noſtrils, fauces, and breaſt, and that the ends of the fingers with which it had been held, become for a time benumbed: that applied for two minutes to the tip of the tongue, it rendered the part rigid, and almoſt void of ſenſation for ſix hours: that leſs than a grain, wrapped up in crumb of bread and taken internally, produced alarming ſymptoms, a burning heat and pain in the ſtomach and bowels, ſtrangury, teneſmus, thirſt, total loſs of appetite, &c. which were greatly relieved by an acidulated mixture with ſyrup of poppies, and which on the fourth day went entirely off: that an infuſion of three grains of the root in four ounces of wine, ſlowly ſwallowed, occaſioned a tickling in the larynx, and ſhort dry cough, ſoon after a heat in the urinary paſſages and a copious diſcharge of pale urine: that an ounce of the ſliced juicy root, being digeſted with a gentle heat in a pound of vinegar for forty-eight hours, and the bottle frequently ſhaken, the root became almoſt inſipid, and the ſtrained liquor proved acrid in taſte, irritated and conſtringed the fauces, and raiſed a ſhort cough: that this vinegar, mixed with twice its quantity of honey, and gently boiled down to the conſiſtence of honey, proved a ſufficiently grateful oxymel, which taken in doſes of a dram, promoted a copious diſcharge of urine, without inconvenience. He made trial of this oxymel, in the hoſpital at Vienna, in deſperate hydropic and other ſerous diſorders, in which it was found to act as a moſt potent diuretic. He begins with giving a dram twice a day in any ſuitable vehicle, and gradually increaſes the doſe to an ounce, and ſometimes an ounce and a half in a day: if this laſt quantity proves ineffectual, he thinks there are little hopes of any benefit from this medicine. The Edinburgh college have now received into their pharmacopœia a ſyrup of colchicum, made with the ſame infuſion of the root in vinegar as above deſcribed, in which are diſſolved twenty-ſix ounces of fine ſugar.

COLOCYNTHIDIS *medulla. Cucumis Colocynthidis Lin.* Coloquintida, or bitter apple; the medullary part of the dried fruit [*L. E.*]

This is the produce of a plant of the gourd kind growing in Turkey. The fruit is about the ſize of an orange; its medullary part, freed from the rind and ſeeds, is alone made uſe of in medicine: this is very light, white, ſpongy, compoſed of membranous leaves; of an extremely bitter, nauſeous, acrimonious taſte. Colocynth is one of the moſt powerful and moſt violent cathartics. Many eminent phyſicians condemn it as dangerous, and even deleterious: others recommend it not only as an efficacious purgative, but likewiſe as an alterative in obſtinate chronical diſorders. Thus much is certain, that colocynth in the doſe of a few grains, acts with great vehemence, diſorders the body, and ſometimes occaſions a diſcharge of blood. Many attempts have been made to correct its virulence by the addition of acids, aſtringents, and the like; theſe may leſſen the force of the colocynth, but no otherwiſe than might be equally done by a reduction of the doſe. The beſt method of abating its virulence, without diminiſhing its purgative virtue, ſeems to be by triturating it with gummy farinaceous ſubſtances, or the oily ſeeds, which without making any alteration in the colocynth itſelf, prevent its reſinous particles from cohering, and ſticking upon the membranes of the inteſtines, ſo as to irritate, inflame, or corrode them. It is an ingredient in ſome of the purgative pills, and the cathartic extract of the ſhops.

* COLUMBÆ *radix Ph. Edinb. Columbæ Redi Exp. nat.* This is a root brought from Columbo, a town in the iſland of Ceylon, from whence it takes its name, but we are not yet acquainted with the vegetable of which it is a part.

The columbo root has long been a medicine in great repute among the natives of the countries which produce it, in diſorders of the ſtomach and bowels. It was, however, little known or regarded in this country, till Dr. Percival, in his Eſſays Medical and Experimental, Vol. II. publiſhed his obſervations and experiments on this root, with caſes of its efficacy in various diſeaſes depending on the ſtate of the bile; as the bilious colic, bilious fevers, diarrhœas, habitual vomitings, &c. Other practitioners have confirmed its utility in theſe caſes. The doſe of the powder uſually given, is from one ſcruple to two.

CONSOLIDÆ MAJORIS, *ſeu Symphyti majoris radix: Symphyti conſolidæ majoris C. B. Symphyti officinalis Lin.* Comfry; the root [*E.*]

This is a rough hairy plant, growing wild by river-ſides and in watery places. The roots are very large, black on the outſide, white within, full of a viſcid glutinous juice, of no particular taſte. They agree in quality with the roots of althæa; with this difference, that the mucilage of *conſolida* is ſomewhat ſtronger bodied. Many ridiculous hiſtories of the *conſolidating* virtues of this plant are related by authors. It is an ingredient in the compound white decoction of the Edinburgh pharmacopœia.

CONSOLIDA MEDIA, vide BUGULA.

CONSOLIDA MINIMA, vide BELLIS MINOR.

CONTRAYERVA [*L. E.*] *Dorſtenia Contrayerva Lin.*

This is a knotty root, an inch or two in length, about half an inch thick, of a reddiſh brown colour externally, and pale within: long, tough, ſlender fibres ſhoot out from all ſides of it, which are generally loaded with ſmall round knots. This root is of a peculiar kind of aromatic ſmell, and a ſomewhat aſtringent, warm, bitteriſh taſte, with a light and ſweetiſh kind of acrimony when long chewed: the fibres have little taſte or ſmell; the tuberous part therefore ſhould be alone choſen. Contrayerva is one of the mildeſt of thoſe ſubſtances called alexipharmacs: it is indiſputably a good and uſeful diaphoretic, and may be ſafely given in much larger doſes than the common practice is accuſtomed to exhibit it. Its virtues are extracted both by water and rectified ſpirit, and do not ariſe in evaporation with either: the ſpirituous tincture and extract taſte ſtronger of the root than the aqueous ones. It gives name to an officinal powder, and is an ingredient in the Edinburgh theriaca.

CORALLINA: *Muſcus maritimus ſive corallina officinarum C. B.* Coralline, or ſea moſs [*E.*]

This is a branched ſtony ſubſtance of a white colour, growing on rocks, and ſometimes on the ſhells of fiſhes. It is celebrated as a vermifuge, on what foundation I know not. To the taſte it is entirely inſipid.

CORALLIUM RUBRUM. Red coral [*L. E.*]

This is alſo a marine production, of the ſame nature with the foregoing. It cannot reaſonably be looked upon in any other light than as a mere abſorbent; as ſuch it enters the officinal crabs' claw powder, and is ſometimes in practice directed alone.

CORIANDRI *ſemen: Coriandri majoris C. B. Coriandri ſativi Lin.* Coriander; the ſeed [*L. E.*]

Coriander is an umbelliferous plant, differing from all the others of that claſs in producing *ſpherical* ſeeds. Theſe, when freſh, have a ſtrong diſagreeable ſmell, which improves by drying, and becomes ſufficiently grateful; they are recommended as carminative and ſtomachic. They are an ingredient in the officinal compound lime water and electary of bayberries [*L.*]

CORNU CERVI [*L. E.*] The ſtag or harts horns.

Many extraordinary virtues have been attributed to theſe horns, and to all the parts of the animal in general; but experience gives no countenance to them; nor do they ſeem to have any other foundation than the great timidity of the hart, the annual renewal of his horns, and an opinion of his extraordinary longævity; from theſe circumſtances it was inferred, that all the parts of him muſt be proper for intimidating the enraged Archeus, renewing health and ſtrength, and prolonging life.

The horns boiled in water, give an emollient nutritious *gelly* [*E.*] Burnt to whiteneſs, they yield an abſorbent earth, purer from gelatinous matter than the natural teſtaceous abſorbents, but which appears to be weaker in its abſorbent power. This earth is employed in the officinal white decoction [*L. E.*]

COSTUS [*L. E.*] *Coſtus*: a root brought from the Eaſt Indies.

Authors mention two ſorts of coſtus, ſweet and bitter: in the ſhops we ſeldom meet with more than one, the *coſtus dulcis officinarum C. B. Coſtus arabicus Lin.* The root is about the ſize of the finger; and conſiſts of a yellowiſh woody part incloſed within a whitiſh bark: the former is very tough, of no ſmell, and very little taſte; the cortical part brittle, of a warm, bitteriſh, aromatic taſte, and an agreeable ſmell, ſomewhat reſembling that of violets or Florentine orris. Coſtus is ſaid to attenuate viſcid humours, to promote expectoration, perſpiration, and urine. At preſent it is rarely met with in preſcription, and not often in the ſhops; in mithridate, theriaca, and the confectio paulina, the only officinal compoſitions it is directed in, zedoary ſupplies its place.

COSTUS HORTORUM, vide BALSAMITA MAS.

CRASSULÆ *ſive Telephii folia: Telephii vulgaris C. B. Sedi Telephii Lin.* Orpine; the leaves [*E.*]

This is a very thick-leaved juicy plant, not unlike the houſeleeks. It has a mucilaginous roughiſh taſte, and hence is recommended, as emollient and aſtringent, but has never been regarded in practice.

CREPITUS LUPI, vide LYCOPERDON.

CRETA [*L. E.*] White chalk.

This is a pure alkaline earth, totally ſoluble in vinegar, and the lighter acids, ſo as to deſtroy every ſenſible mark of their acidity. This earth is one of the moſt uſeful of the abſorbents, and is to be looked upon ſimply as ſuch; the aſtringent virtues which ſome attribute to it have no foundation, unleſs ſo far as the earth is ſatiated with acid, with which it compoſes a ſaline concrete manifeſtly ſubaſtringent. It gives name to an officinal julep [*L.*] and decoction [*E.*] and is an ingredient in the cardialgic troches. It is employed alſo for extricating the volatile ſalt of ſal ammoniac [*L.*]

CRITHMI *folia: Crithmi ſive fœniculi maritimi minoris C. B.* Sampire; the leaves [*E.*]

This plant grows wild on rocks, and in maritime places: the leaves are ſomewhat like thoſe of fennel, but the ſegments much thicker and ſhorter: their ſmell reſembles that of ſmallage; the taſte is warm, bitteriſh, not agreeable. They are ſaid to be ſtomachic, aperient, and diuretic.

CROCUS: *Crocus ſativus C. B.* Saffron; the chives or fleſhy capillaments growing at the end of the piſtil of the flower, carefully picked and preſſed together into cakes [*L. E.*]

There are three ſorts of ſaffron met with in the ſhops, two of which are brought from abroad, the other is the produce of our own country; this laſt is greatly ſuperior to the other two, from which it may be diſtinguiſhed by its blades being broader. When in perfection, it is of a fiery orange red colour, and yields a deep yellow tincture: it ſhould be choſen freſh, not above a year old, in cloſe cakes, neither dry, nor yet very moiſt, tough and firm in tearing, of the ſame colour within as without, and of a ſtrong, acrid, diffuſive ſmell.

Saffron is a very elegant and uſeful aromatic: beſides the virtues which it has in common with all the bodies of that claſs, it remarkably exhilarates, raiſes the ſpirits, and is deſervedly accounted one of the higheſt cordials; taken in large doſes, it is ſaid to occaſion immoderate mirth, involuntary laughter, and the ill effects which follow from the abuſe of ſpirituous liquors. This medicine is particularly ſerviceable in hyſteric depreſſions proceeding from a cold cauſe or obſtruction of the uterine ſecretions, where other aromatics, even thoſe of the more generous kind, have little effect. Saffron imparts the whole of its virtue and colour to rectified ſpirit, proof ſpirit, wine, vinegar, and water: a tincture drawn with vinegar, loſes greatly of its colour in keeping: the watery and vinous tinctures are apt to grow ſour, and then loſe their colour alſo: that made in pure ſpirit keeps in perfection for many years. Its officinal preparations are, a ſpirituous tincture [*E.*] a vinous tincture, and ſyrup [*L.*] It is an ingredient in the cordial confection [*L.*] the *ſudorific* tincture, the *pectoral* and *paregoric* elixirs, the powder for promoting *delivery* [*E.*] and ſeveral of the aloetic compoſitions.

CUBEBÆ [*L. E.*] Cubebs.

Cubebs are a fruit brought from the Eaſt Indies. This fruit has a great reſemblance to pepper. The principal difference diſtinguiſhable by the eye, is, that each cubeb is furniſhed with a long ſlender ſtalk (whence they are called by ſome *piper caudatum)*. In aromatic warmth and pungency, cubebs are far inferior to pepper. They are an ingredient in mithridate and theriaca, [*L.*] and in the compound ſpirit of lavender [*E*].

CUCUMERIS HORTENSIS *ſemen* Garden cucumbers; the ſeeds [*E.*]

These are in the number of the four greater cold ſeeds; they are leſs apt to grow rancid in keeping than the others of that claſs.

CUCUMERIS AGRESTIS *fructus: Cucumeris ſylveſtris aſinini dicti C. B. Momordicæ Elaterii Lin.* Wild cucumber; the fruit [*L. E.*]

This plant, found wild in foreign countries, is, with us, cultivated in gardens. Its principal botanic difference from the former, is the ſmallneſs of its fruit, which is no bigger than a Spaniſh olive: when ripe, it burſts on a light touch, and ſheds its ſeeds with violence, and hence was named by the Greeks *elaterium.* This name was applied likewiſe to the inſpiſſated juice of the fruit, the only preparation of the plant made uſe of in medicine. Elaterium is a ſtrong cathartic, and very often operates alſo upwards. Two or three grains are accounted in moſt caſes a ſufficient doſe. Simon Paulli relates ſome inſtances of the good effects of this purgative in dropſies; but cautions practitioners not to have recourſe to it till after milder medicines have proved ineffectual; to which caution we heartily ſubſcribe. Medicines, indeed, in general, which act with violence in a ſmall doſe, require the utmoſt ſkill to manage them with any tolerable degree of ſafety: to which may be added, that the various manners of making theſe kinds of preparations, as practiſed by different hands, muſt needs vary their power.

CUCURBITÆ *ſemen: Cucurbitæ oblongæ, flore albo, folio molli C. B. Cucurbitæ lagenariæ Lin.* The gourd; its ſeeds [*E.*]

Theſe are in the number of the four greater cold ſeeds. They unite with water by trituration into an emulſion, and yield to the preſs a ſoft inſipid oil, and poſſeſs the general virtues of unctuous ſubſtances.

CUMINUM, vide CYMINUM.

CUPRESSI *fructus. Cupreſſi ſempervirentis Lin.* The cypreſs tree; its fruit.

This is a tall tree growing wild in the warmer climates. The fruit is a ſtrong aſtringent; and in ſome places frequently uſed as ſuch: among us it is very rarely employed, and not often met with in the ſhops.

CUPRUM [*L. E.*] Copper.

The preparations of copper are violently emetic, and therefore very rarely exhibited internally. Some have ventured upon a ſolution of a grain or two of the metal in vegetable acids, and obſerve, that it acts almoſt as ſoon as received into the ſtomach, ſo as to be of good uſe for occaſioning poiſonous ſubſtances that have been ſwallowed, to be immediately thrown up again. Boerhaave recommends a ſaturated ſolution of this metal in volatile alkaline ſpirits, as a medicine of great ſervice in diſorders proceeding from an acid, weak, cold, phlegmatic cauſe: if three drops of this tincture be taken every morning with a glaſs of mead, and the doſe doubled every day to twenty-four drops, it proves, (he ſays) aperient, attenuating, warming, and diuretic: he aſſures us, that by theſe means he cured a confirmed aſcites, and that the urine run out as from an open pipe: but at the ſame time acknowledges, that upon trying the ſame medicine on others, it failed. He likewiſe recommends other preparations of copper, as of wonderful efficacy in certain kinds of ill habits, weakneſs of the ſtomach, &c. but we cannot think the internal uſe of this metal commendable, or even ſafe. Phyſicians in general ſeem to be agreed, that it has really a virulent quality; and too many examples are met with of fatal conſequences enſuing upon eating food that had been dreſt in copper veſſels not well cleaned from the ruſt which they had contracted by lying in the air.

Great care ought to be taken that acid liquors, or even water deſigned for internal uſe, be not ſuffered to ſtand long in veſſels made of copper; otherwiſe they will diſſolve ſo much of the metal as will give them diſagreeable qualities. Hence in the diſtillation of ſimple waters with copper ſtills, the laſt runnings, which are manifeſtly acid, have frequently proved emetic. It is remarkable, that whilſt weak acid liquors are kept boiling in copper veſſels, they do not ſeem to diſſolve any of the metal; but if ſuffered to remain in them for the ſame length of time without boiling, they become notably impregnated with the copper. Hence the confectioners, by ſkilful management, prepare the moſt acid ſyrups in copper veſſels without giving them any ill taſte from the metal.

CURCUMA [*E.*] *Curcuma longa Lin.* Turmeric.

Turmeric is a root brought from the Eaſt Indies. It is internally of a deep lively yellow, or ſaffron-colour, which it readily imparts to watery liquors. It has an agreeable, weak ſmell, and a bitteriſh ſomewhat warm taſte. Turmeric is eſteemed aperient and emmenagogue, and of ſingular efficacy in the jaundice. It is an ingredient in the icteric decoction of the Edinburgh pharmacopœia. It tinges the urine of a ſaffron colour.

* CURSUTÆ *radix Ph. Edinb.*

This is a foreign root, which has been uſed by ſome practitioners at Edinburgh for more than forty years. It is a ſtrong bitter, and has very much the appearance and taſte of gentian. Dr. Home, in his liſt of the materia medica, ſtiles it *Gentiana lutea ſylveſtris*; while he terms the common gentian, *Gentiana lutea ſativa.* No botanic author, however, makes this diſtinction; nor can the name of curſuta be met with in any writer the editor has conſulted. The Edinburgh college received it on Dr. Home's recommendation; but it is little uſed there, and is not in general kept in the ſhops.

CUSCUTA. Dodder.

This is of the claſs of plants called paraſitical, or which grow out from the body of others. It has no leaves, but conſiſts only of a number of juicy filaments matted together. There are two ſorts of it, *cuſcuta major C. B.* which grows commonly in heaths on furzes, nettles, &c. and likewiſe in fields on flax, and other manured plants; and the *cuſcuta minor*, or *epithymum* of the ſame author, ſo called from its being found only upon thyme. This latter is preferred for medicinal uſe, and is uſually brought from Leghorn and Turkey, with tops and ſtalks of thyme among it. Epithymum has a pretty ſtrong ſmell, and roughiſh ſomewhat pungent ſubtile taſte. Its virtues remain as yet to be determined; the ancients ranked it among cathartics; but thoſe who have given it in that intention have been generally diſappointed.

CYANI *flores Cyani ſegetum C. B. Centaureæ Cyani Lin.* Bluebottle; the flowers.

This is a common weed among corn. The flowers are of an elegant blue colour, which, if carefully and haſtily dried, they retain for a conſiderable time. As to their virtues, the preſent practice expects not any from them; notwithſtanding they have been formerly celebrated againſt the bites of poiſonous animals, contagious diſeaſes, palpitations of the heart, and many other diſtempers.

CYCLAMEN, vide ARTHANITA.

CYDONIA MALA, *eorumque ſemina: Fructus Cotoneæ mali J. B. Pyrus Cydonea Lin.* The quince-tree; the fruit and its ſeeds [*L. E.*]

Quinces have a very auſtere acid taſte: taken in ſmall quantity, they are ſuppoſed to reſtrain vomiting, and alvine fluxes; and more liberally, to looſen the belly. The ſeeds abound with a mucilaginous ſubſtance, of no particular taſte, which they readily impart to watery liquors: an ounce will render three pints of water thick and ropy like the white of an egg. A ſyrup [*L.*] and gelly [*E.*] of the fruit, and mucilage of the ſeeds [*L.*] are kept in the ſhops.

CYMINI *ſemen: Cymini ſemine longiore C. B. Cumini Cymini Lin. Fœniculi orientalis cumini dicti Tourn.* Cummin; the ſeeds [*L. E*]

This is an umbelliferous plant, in appearance reſembling fennel, but much ſmaller; the ſeeds are brought chiefly from Sicily and Malta. Cummin ſeeds have a bitteriſh warm taſte, accompanied with an aromatic flavour, not of the moſt agreeable kind. They are accounted good carminatives, but not very often made uſe of. An eſſential oil of them is kept in the ſhops, and they give name to a plaſter and cataplaſm [*L.*]

CYNOBASTI *fructus: Roſæ ſylveſtris vulgaris flore odorato incarnato C. B. Roſæ caninæ Lin.* The wild briar, dog roſe, or hip tree; its fruit [*L E.*]

This buſh grows wild in hedges throughout England. The flowers have a pleaſant ſmell; but ſo weak, that Parkinſon and others have named the plant *roſa ſylveſtris inodora:* a water diſtilled from them ſmells agreeably. The fruit or hips contain a ſouriſh ſweetiſh pulp; with a rough prickly matter incloſing the ſeeds, from which the pulp ought to be carefully ſeparated before it is taken internally. The Wirtemberg college obſerves, that from a neglect of this caution, the pulp of hips ſometimes occaſions a pruritus, and uneaſineſs about the anus; and I have known the conſerve of it to excite violent vomiting. The conſerve is the only officinal preparation of this fruit.

CYPERI LONGI *radix: Cyperi odorati radice longa, ſive cyperi officinarum C. B.* Long cyperus; the root.

This is a plant of the graminifolious kind; it is ſometimes found wild, in marſhy places in England; the roots have been generally brought to us from Italy. This root is long, ſlender, crooked, and full of knots: outwardly of a dark brown, or blackiſh colour, inwardly whitiſh; of an aromatic ſmell, and an agreeable warm taſte: both the taſte and ſmell are improved by moderate exſiccation. Cyperus is accounted a good ſtomachic and carminative, but at preſent very little regarded.

DACTYLI: *Fructus Palmæ majoris C. B. Phœnicis dactyliferæ Lin.* Dates [*E.*]: a half dried fruit, about the ſhape of an acorn, but generally larger, conſiſting of a ſweet pulpy part and a hard ſtone: the beſt are brought from Tunis. They were formerly uſed in pectoral decoctions, and ſuppoſed, beſides their emollient and incraſſating virtue, to have a ſlight aſtringency.

DAUCI CRETICI *ſemen: Dauci foliis fœniculi tenuiſſimis C. B. Athamantæ Cretenſis Lin.* Candy carrot, or carrot of Crete; the ſeeds [*L. E.*]

This is an umbelliferous plant, growing wild in the Levant, and the warmer parts of Europe. The ſeeds, which are brought from Crete, have a warm biting taſte, and rather an aromatic ſmell. They are carminative, and ſaid to be diuretic, but at preſent little otherwiſe uſed than as ingredients in the mithridate and theriaca.

DAUCI SYLVESTRIS *ſemen: Paſtinacæ ſylveſtris tenuifoliæ Dioſcoridis, vel dauci officinarum C. B. Dauci carotæ Lin.* Wild carrot; the ſeed [*E.*]

This is common in paſture grounds and fallow fields throughout England. The ſeeds poſſeſs the virtues of thoſe of the *daucus Creticus*, in an inferior degree: and have often ſupplied their place in the ſhops; and been themſelves ſupplied by the ſeeds of the garden carrot; theſe laſt are, in warmth and flavour, the weakeſt of the three: the ſeeds of the Candy carrot are much the ſtrongeſt.

DENTIS LEONIS *ſive Taraxaci, radix et folia: Dentis leonis latiore folio, et anguſtiore folio C. B. Leontodonis Taraxaci Lin.* Dandelion; the root and herb [*E.*]

This plant is common in fields, and uncultivated places; it has ſeveral narrow dentated leaves lying on the ground, with a ſlender naked ſtalk ſuſtaining a yellow flower. The root, leaves, and ſtalk, contain a bitter milky juice: they promiſe to be of uſe as aperient and detergent medicines; and have ſometimes been directed in this intention with good ſucceſs. Boerhaave eſteems them capable, if duly continued, of reſolving almoſt all kinds of coagulations, and opening very obſtinate obſtructions of the viſcera.

DIAPENSIA, vide SANICULA.

DICTAMNUS ALBUS, vide FRAXINELLA.

DICTAMNI CRETICI *folia: Origani Cretici latifolii tomentoſi Tourn.* Dittany of Crete [*L. E.*]

This is a kind of origanum, ſaid to grow plentifully in the iſland of Candy, in Dalmatia, and in the Morea: it has been found hardy enough to bear the ordinary winters of our own climate. The leaves, which are the only part in uſe with us, come from Italy. The beſt ſort are well covered over with a thick white down, and now and then intermixt with purpliſh flowers. In ſmell and taſte, they ſomewhat reſemble lemon thyme; but have more of an aromatic flavour, as well as a greater degree of pungency; when freſh, they yield a conſiderable quantity of an excellent eſſential oil. They are ingredients in the *pulvis e myrrha, ſpecies e ſcordio, mithridate,* and *theriaca* [*L.*]

DIGITALIS *folia: Digitalis purpureæ folia aſpero C. B.* Foxglove; the leaves.

This grows wild in woods, and on uncultivated heaths: the elegant appearance of its purple flowers (which hang in ſpikes along one ſide of the ſtalk) has gained it a place in ſome of our gardens. The leaves have been ſtrongly recommended, externally againſt ſcrophulous tumours; and likewiſe internally, in epileptic diſorders: what ſervice they may be capable of doing in theſe caſes, we have no experience. Several examples are mentioned by medical writers of their occaſioning violent vomiting, hypercatharſes, and diſordering the whole conſtitution; inſomuch that Boerhaave accounts them poiſonous. Their taſte is bitter and very nauſeous.

* DOLICHOS *Ph. Edinb. Dolichos*

lichos pruriens Lin. Couhage, or Cow-Itch. *Cadjuſt, Bengalis.*

This is an herbaceous plant, of the papilionaceous tribe, growing in the Eaſt and Weſt Indies. It bears pods, denſely covered with ſharp hairs, which have the property of penetrating the ſkin, and cauſing a moſt troubleſome itching. In the Weſt Indies, the cow-itch is given internally, as an efficacious anthelmintic. The moſt particular account of the uſe of this remedy is contained in Mr. Bancroft's Hiſt. of Guinea, and it is confirmed by a letter in the Medical Comment. vol. II.

The manner in which it is employed, is to mix the hairy matter ſcraped off from the pods, with ſyrup or melaſſes, into a thin electary, of which a tea-ſpoonful is given to a child two or three years old, and double the quantity to an adult. The doſe is exhibited in the morning, faſting, for three ſucceſſive days, after which a doſe of rhubarb is given. Its effects are repreſented as remarkably powerful and certain, without the leaſt dangerous conſequence.

Mr. Kerr has given a botanical deſcription of the plant in the Medical Comment. vol. II.

DORONICI GERMANICI, *ſeu Arnicæ, folia et radix : Doronici plantaginis folio alterius C. B. Arnicæ montanæ Lin.* German leopardſbane ; the leaves and root [*E.*]

This plant is a native of Germany. It has been eſteemed a ſpecific for reſolving coagulated blood, but operates ſo violently, that it is rarely uſed. The doſe is ſaid to be one or two pugils of the leaves, and, in ſome caſes, of the roots.

DRACONTIUM : *Dracunculis polyphyllus C. B. Arum polyphyllum Rivini. Arum Dracunculus Lin.* Dragons, or the many-leaved arum.

This is cultivated in gardens. It has ſcarce any other medical difference from the common *arum*, than being in all its parts ſomewhat more pungent and acrimonious.

DRAKENA, vide CONTRAYERVA.

DULCAMARÆ, *ſeu Amaradulcis, ſolani lignoſi, herba, radix : Solani ſcandentis ſeu dulcamaræ C. B.* Bitterſweet, or woody nightſhade ; the herb and roots. [*E.*]

This plant grows wild in moiſt hedges, and climbs on the buſhes with woody brittle ſtalks. The taſte of the twigs and roots, as the name of the plant expreſſes, is both bitter and ſweet ; the bitterneſs being firſt perceived, and the ſweetneſs afterwards. They are commended as deobſtruents for reſolving coagulated blood, &c. and are ſaid to occaſion generally ſome conſiderable evacuation by ſweat, urine, or ſtool, particularly the laſt.

EBULI *folia, cortex, radix : Sambuci humilis ſive ebuli C. B.* Dwarf elder, or danewort ; the root, bark, and leaves [*E.*]

This plant grows wild in ſome counties of England ; but about London is rarely met with, unleſs in gardens : the eye diſtinguiſhes little difference betwixt it and the elder tree, except in the ſize ; the elder being a pretty large tree, and the dwarf elder only an herb three or four feet high. The leaves, roots, and bark of *ebulus* have a nauſeous, ſharp, bitter taſte, and a kind of acrid ungrateful ſmell : they are all ſtrong cathartics, and as ſuch are recommended in dropſies, and other caſes where medicines of that kind are indicated. The bark of the root is ſaid to be ſtrongeſt ;

ſtrongeſt; the leaves the weakeſt. But they are all too churliſh medicines for general uſe; they ſometimes evacuate violently upwards, almoſt always nauſeate the ſtomach, and occaſion great uneaſineſs of the bowels. By boiling they become (like the other draſtics) milder, and more ſafe in operation. Fernelius relates, that by long coction they entirely loſe their purgative virtue. The berries of this plant are likewiſe purgative, but leſs virulent than the other parts. A rob prepared from them may be given to the quantity of an ounce, as a cathartic; and in ſmaller ones as an aperient and deobſtruent in chronic diſorders: in this laſt intention, it is ſaid by Haller to be frequently uſed in Swiſſerland, in the doſe of a dram.

ELATINES *folia: Linariæ ſegetum nummulariæ folio non villoſo Tourn. Antirrhini Elatines Lin.* Fluellin, or female ſpeedwell; the leaves.

This is a low creeping plant, growing wild in corn fields. The leaves have a very bitter, roughiſh taſte. They were formerly conſidered as excellent vulneraries, and of great uſe for cleanſing and healing old ulcers and ſpreading cancerous ſores: ſome have recommended them internally in leprous and ſcrophulous diſorders; as alſo in hydropic caſes. It gives name to one of the officinal honeys [*L.*]; but the plant itſelf is never uſed in the preſent practice, and this preparation of it is in no great eſteem.

ELEMI [*L. E.*] Gum elemi.

This is a reſin brought from the Spaniſh Weſt Indies, and ſometimes from the Eaſt Indies, in long roundiſh cakes, generally wrapped up in flag leaves. The beſt ſort is ſoftiſh, ſomewhat tranſparent, of a pale whitiſh yellow colour, inclining a little to greeniſh, of a ſtrong not unpleaſant ſmell. It almoſt totally diſſolves in pure ſpirit, and ſends over ſome part of its fragrance along with this menſtruum in diſtillation: diſtilled with water, it yields a conſiderable quantity of a pale coloured, thin, fragrant, eſſential oil. This reſin gives name to one of the officinal unguents, and is at preſent ſcarce any otherwiſe made uſe of; though it is certainly preferable, for internal purpoſes, to ſome others which are held in greater eſteem.

ELEOSELINUM, vide *Apium.*

ELEUTHERIÆ, *ſeu Caſcarillæ cortex* [*L. E.*] *Crotonis Caſcarillæ Lin.* Caſcarilla; a bark ſaid to be imported into Europe from one of the Bahama iſlands called *Elatheria*, in curled pieces, or rolled up into ſhort quills, about an inch in width, pretty much reſembling in appearance the *Peruvianus cortex*, but of a paler brown colour on the inſide, leſs compact, and more friable.

Its taſte is more bitter, yet leſs diſagreeable, and leſs rough than that of the Peruvian bark; with a conſiderably greater ſhare of aromatic pungency and heat: the thin outward ſkin, which is of a whitiſh colour, has no taſte. It is eaſily flammable, and yields, while burning, a very fragrant ſmell: this peculiar property diſtinguiſhes the *eleutheria* from all other known barks.

Stiſſerus ſeems to have been the firſt that employed the *cortex eleutheriæ* as a medicine, in Europe; he relates (in his *Act. laborat. chym.* publiſhed in the year 1693) that he received this aromatic bark from England; and that, ſome time after, it was ſold at Brunſwick for Peruvian bark: that a tincture of it in alkalized vinous ſpirits, or dulcified alkaline ones, proved carminative and diuretic, and did conſiderable ſervice in arthritic, ſcorbutic, and calculous caſes; and that if taken immediately after meals, it affected the head a little. Eleutheria was ſoon after employed by Apinus in an epidemic fever which raged in ſome parts of Norway in 1694 and 1695: this diſeaſe, which at firſt had the appearance of an ordinary intermittent, at length was accompanied with petechial ſpots. The common alexipharmacs and ſudorifics were found ineffectual: but the powder or extract of this bark, joined with them, proved ſucceſsful, even after petechiæ had come forth: dyſenteries ſucceeding the fever were removed by the ſame medicine: During the uſe of the eleutheria, the patient generally ſweated plentifully, without loſs of ſtrength, or other inconvenience: the belly was likewiſe kept open; thoſe who did not ſweat, had three or four ſtools a day: where the menſtrual or hæmorrhoidal fluxes were ſuppreſſed, at the beginning of the diſorder, they generally, upon the uſe of this medicine, re-appeared. Among the Germans, the eleutheria is at preſent in very great eſteem, and frequently employed againſt common intermittents, in preference to the Peruvian bark, as being leſs ſubject to ſome inconveniences which the latter, on account of its greater aſtringency, is apt to occaſion: it is alſo given, with good ſucceſs, in flatulent colics, internal hæmorrhages, dyſenteries, the diarrhœæ of acute fevers, and other ſimilar diſorders. The gentlemen of the French academy found this bark of excellent ſervice in an epidemic dyſentery in the year 1719; in which ipecacuanha proved ineffectual. M. Boulduc obſerved, that this latter left a lowneſs and weakneſs of ſtomach, which continued for a long time, whilſt eleutheria ſoon raiſed the ſtrength, and promoted appetite. Among us the uſe of this bark is not yet ſo general as it ſeems to deſerve: infuſions of it are ſometimes directed for promoting expectoration.

ENDIVIÆ *radix, folia: Intybi ſativæ latifoliæ C. B. Cichorii endiviæ Lin.* Endive; the roots and leaves [*E.*]

Endive is raiſed in gardens for culinary uſe. It is a gentle cooler and aperient, nearly of the ſame quality with the *cichorium.* The ſeeds are ranked among the four leſſer cold ſeeds.

ENULÆ CAMPANÆ *ſeu Helenii radix: Aſteris omnium maximi Tourn.* Elecampane; the root [*L. E.*]

This is a very large downy plant, ſometimes found wild in moiſt rich ſoils. The root, eſpecially when dry, has an agreeable aromatic ſmell: its taſte, on firſt chewing, is glutinous, and as it were ſomewhat rancid; in a little time it diſcovers an aromatic bitterneſs, which by degrees becomes conſiderably acrid and pungent. Elecampane root poſſeſſes the general virtues of alexipharmacs: it is principally recommended for promoting expectoration in humoural aſthmas and coughs, in which intention it enters the pectoral oxymel of the Edinburgh pharmacopœia: liberally taken, it is ſaid to excite urine, and looſen the belly. In ſome parts of Germany, large quantities of this root are candied, and uſed as a ſtomachic, for ſtrengthening the tone of the viſcera in general, and for attenuating tenacious juices. Spirituous liquors extract its virtues in greater perfection than watery ones: the former ſcarce elevate any thing in diſtillation: with the latter an eſſential oil ariſes, which concretes into white flakes: this poſſeſſes at firſt the flavour of the elecampane, but is very apt to loſe it in keeping. An extract made with water (a preparation now kept in the ſhops) poſſeſſes the bitterneſs and pungency of the root, but in a leſs degree than one made with ſpirit.

EQUISETUM, vide CAUDA EQUINA.

ERIGERI, *ſeu Senecionis folia: Senecionis minoris vulgaris C. B.* Groundſel; the leaves [*E.*]

This is a common weed, which, notwithſtanding its being annual, is met with at all times of the year. The juice, or an infuſion of it in ale, is generally ſaid to be a mild and ſafe emetic; but unleſs taken in very large quantity, it has no effect this way. The freſh herb, beaten into a very coarſe pulp, and applied externally, cold, to the pit of the ſtomach, is ſaid to have occaſioned ſtrong vomiting: but, as Haller juſtly ſuſpects, there was probably ſome fallacy in the obſervation.

ERUCÆ *ſemen: Erucæ latifoliæ albæ, ſativæ Dioſcoridis C. B. Braſſicæ Erucæ Lin.* Rocket; the ſeeds [*E.*]

This was formerly much cultivated in gardens for medicinal uſe, and for ſalads: but is at preſent leſs common. In appearance, it reſembles muſtard, but is eaſily diſtinguiſhable by the ſmoothneſs of its leaves, and its diſagreeable ſmell. The ſeeds have a pungent taſte, of the muſtard kind, but weaker: they have long been celebrated as aphrodiſiacs, and may, probably, have in ſome caſes a title to this virtue, in common with other acrid plants.

ERVUM, vide OROBUS.

ERYNGII *radix: Eryngii maritimi C. B.* Eryngo, or ſea holly; the root [*L. E.*]

This plant grows plentifully on ſome of our ſandy and gravelly ſhores; the roots are ſlender, and very long; of a pleaſant ſweetiſh taſte, which, on chewing them for ſome time, is followed by a light degree of aromatic warmth and acrimony. They are conſidered as aperient and diuretic, and have alſo been celebrated as aphrodiſiac; their virtues however are too weak to admit them under the head of medicines. The candied root is ordered to be kept in the ſhops.

ERYSIMI *folia: Eryſimi vulgaris C. B. Eryſimi officinalis Lin.* Hedge muſtard; the leaves [*E.*]

This is a low hairy plant, common in waſte places, and by waysſides. The leaves are ſaid to promote expectoration, excite urine, and the other fluid ſecretions, attenuate and diſſolve viſcid juices, &c. This they are ſuppoſed to perform by an acrimonious ſtimulating quality; but the taſte diſcovers in them only an herbaceous ſoftneſs void of acrimony: the ſeeds indeed are conſiderably pungent, and the roots in ſome ſmall degree.

ESULA MAJOR et MINOR, vide TITHYMALUS.

EUPATORII CANNABINI *folia: Eupatorii cannabini C. B.* Hemp agrimony, water agrimony, or water hemp; the leaves.

This plant is found wild by the ſides of rivers and ditches. It has an acrid ſmell, and a very bitter taſte, with a conſiderable ſhare of pungency. The leaves are greatly recommended for ſtrengthening the tone of the viſcera, and as an aperient; and ſaid to have excellent effects in the dropſy, jaundice, cachexies, and ſcorbutic diſorders. Boerhaave informs us, that this is the common medicine of the turf-diggers in Holland, againſt ſcurvies, foul ulcers, and ſwellings in the feet, to which they are ſubject. The root of this plant is ſaid to operate as a ſtrong cathartic.

EUPATORIUM MESUES, vide AGERATUM.

EUPATORIUM GRÆCORUM, vide AGRIMONIA.

EUPHORBIUM [*E.*] *Ex Euphorbia officinarum Lin.* a gummy reſin exuding from a large oriental ſhrub. It is brought to us immediately from Barbary, in drops of an irregular form; ſome of which, upon being broken, are found to contain little thorns, ſmall twigs, flowers, and other vegetable matters; others are hollow, without any thing in their cavity: the tears in general are of a pale yellow colour externally, ſomewhat white withinſide: they eaſily break betwixt the fingers. Lightly applied to the tongue, they affect it with a very ſharp biting taſte; and, upon being held for ſome time in the mouth, prove vehemently acrimonious, inflaming, and exulcerating the fauces, &c. Euphorbium is extremely troubleſome to pulverize; the finer part of the powder, which flies off, affecting the head in a violent manner. The acrimony is ſo great as to render it abſolutely unfit for any internal uſe: ſeveral correctors have been contrived to abate its virulence; but the beſt of them are not to be truſted to; and as there ſeems to be no real occaſion for it, unleſs for ſome external purpoſes, we think, with Hoffman and others, that it ought to be expunged from the catalogue of internal medicines.

FARFARA, vide TUSSILAGO.

FERRUM et CHALYBS [*L. E.*] Iron and ſteel [*L. E.*]

Steel is accounted leſs proper for medicinal uſe than the ſofter iron, as being acted upon with more difficulty by the animal juices and the common menſtrua: iron diſſolves readily in all acids, and ruſts freely in the air, eſpecially if occaſionally moiſtened with water; ſteel requires a longer time for its ſolution, and does not ruſt ſo eaſily.

The general virtues of theſe metals, and the ſeveral preparations of them, are, to conſtringe the fibres, to quicken the circulation, to promote the deficient ſecretions in the remoter parts, and at the ſame time repreſs inordinate diſcharges into the inteſtinal tube. After the uſe of them, if they take effect, the pulſe is very ſenſibly raiſed; the colour of the face, though before pale, changes to a florid red; the alvine, urinary, and cuticular excretions, are increaſed. Nidorous eructations, and the fæces voided of a black colour, are marks of their taking due effect.

An aperient virtue is uſually attributed to ſome of the preparations of iron, and an aſtringent to others; but in reality, they all produce the effects both of aperients and aſtringents, and ſeem to differ only in degree. Thoſe diſtinguiſhed by the name of aſtringent ſometimes occaſion a very copious diſcharge of urine, or a diarrhœa; whilſt thoſe called aperient frequently ſtop theſe evacuations.

Where either a præternatural diſcharge, or ſuppreſſion of natural ſecretions, proceed from a languor and ſluggiſhneſs of the fluids, and weakneſs of the ſolids; this metal, by increaſing the motion of the former, and the ſtrength of the latter, will ſuppreſs the flux, or remove the ſuppreſſion: but where the circulation is already too quick, the ſolids too tenſe and rigid, where there is any ſtricture or ſpaſmodic contraction of the veſſels; iron, and all the preparations of it, will aggravate equally both diſtempers.

Though the different preparations of iron act all in the ſame manner, yet they are not equally proper in all conſtitutions. Where acidities abound in the firſt paſſages, the crude filings, reduced into a fine powder, prove more ſerviceable than the moſt elaborate preparation of them. On the other hand, where there is no acid in the primæ viæ, the metal requires to be previouſly opened by ſaline menſtrua: hence a ſolution of iron in acid liquors has in many caſes excellent effects, where (as Boerhaave obſerves) the more indigeſtible preparations, as the calces made by fire, have ſcarce any effect at all. If alkaleſcent juices be lodged in the ſtomach, this metal, though given in a liquid form, proves at leaſt uſeleſs; for here the acid ſolvent is abſorbed by the alkaline matters which it meets with in the body, ſo as to leave the iron reduced to an inactive calx.

Chalybeate medicines are likewiſe ſuppoſed to differ, independent of differences in the conſtitution, according to the nature of the acid united with the metal: vegetable acids ſuperadd a detergency and aperient virtue: combined with the vitriolic, the metal acts in the firſt paſſages powerfully as an aperient; whilſt the nitrous renders it extremely ſtyptic; and the marine ſtill more ſo. For the different preparations of iron, ſee the third part of this work.

FILIPENDULÆ *radix: Filipendulæ vulgaris, an Moli Plinii C. B.* Dropwort; the root.

This plant grows wild in fields and chalky grounds: the root conſiſts of a number of tubercles, faſtened together by ſlender ſtrings; its taſte is rough and bitteriſh, with a ſlight degree of pungency. Theſe qualities point out its uſe in a flaccid ſtate of the veſſels; and a ſluggiſhneſs of the juices: the natural evacuations are, in ſome meaſure, reſtrained or promoted by it, where the exceſs or deficiency proceed from this cauſe. Hence ſome have recommended it as an aſtringent in dyſenteries, immoderate uterine fluors, &c. others as a diuretic: and others as an aperient and deobſtruent in ſcrophulous habits. At preſent it is wholly diſregarded.

FILICIS MARIS *radix: Filicis non ramoſæ, dentatæ C. B. Polypodii Filicis Maris Lin.* Common male fern; the root [*E.*]

FILICIS FŒMINÆ *radix: Filicii ramoſæ majoris pinnulis obtuſis non dentatis C. B. Polypodii Filicis fœminæ Lin.* Female fern; or brakes; the root [*E.*]

FILICIS FLORIDÆ, *ſeu Oſmundæ regalis radix: Filicis ramoſæ non dentatæ floridæ C. B.* Oſmund royal, or the flowering fern; the root [*E.*]

The roots of theſe plants (which are the only part directed for medicinal uſe) have, when firſt chewed, ed, ſomewhat of a ſweetiſh glutinous taſte, which ſoon becomes bitteriſh, ſubaſtringent, and nauſeous. They are ſaid to be aperient and anthelmintic. Simon Paulli tells us, that they have been the grand ſecret of ſome empirics againſt the broad kind of worms called *tænia*; and that the doſe is one, two, or three drams of the powder. The third ſort is ſuppoſed to be the weakeſt, and the ſecond the ſtrongeſt; this therefore has been generally made choice of; practice has, however, at length expunged them all, though the college of Edinburgh ſtill retains them in their catalogue of ſimples.

* FLAMMULA JOVIS *Stœrck. Ph. Edinb. Flammula recta C. B. Clematis recta Lin* Upright Virgin's Bower: This ſpecies of clematis, diſtinguiſhed by its pinnated oval leaves, and erect ſtalk, grows wild in thickets in the ſouthern parts of France and Germany. Its leaves and flowers are extremely acrid; the former, when freſh, raiſing bliſters on the part to which they are applied.

The flammula jovis is one of the new medicines introduced by Dr. Stœrck. He has publiſhed ſeveral caſes of its efficacy in cancerous, venereal, and other malignant ulcers, obſtinate pains of the head and bones, inveterate itch, and other diſeaſes proceeding from peculiar acrimony. It was uſed internally, in infuſion of the flowers or leaves, and extract of the plant; and the powder was ſprinkled on the ulcers externally, where it was found to act as a moſt excellent eſcharotic and detergent. The medicine is ſaid to have proved diuretic to ſome, and ſudorific to others, but rarely to have moved the belly. Small doſes, of only half a grain of the extract, and half a dram of the dried leaves in infuſion, were at firſt exhibited, which were gradually increaſed.

FŒNICULI DULCIS, *ſemen Fœniculi dulcis C. B.* Sweet fennel; the ſeeds [*L. E.*]

FŒNICULI VULGARIS *folia, radix, ſemen: Fœniculi vulgaris germanici C. B. Anethi Fœniculi Lin.* Common fennel; the ſeeds, roots, and leaves [*E.*]

The ſweet fennel is ſmaller in all its parts than the common, except the ſeeds, which are conſiderably larger. The ſeeds of the two ſorts differ likewiſe in ſhape and colour: thoſe of the common are roundiſh, oblong, flattiſh on one ſide, and protuberant on the other, of a dark, almoſt blackiſh colour; thoſe of the ſweet are longer, narrower, not ſo flat, generally crooked, and of a whitiſh or pale yellowiſh colour. Both ſorts are cultivated in our gardens: the common is a perennial plant: the ſweet periſhes after it has given ſeed; nor do its ſeeds come to ſuch perfection in this climate as thoſe which we receive from Germany.

The ſeeds of both the fennels have an aromatic ſmell, and a moderately warm, pungent taſte: thoſe of the *fœniculum dulce* are in flavour moſt agreeable, and have alſo a conſiderable degree of ſweetiſhneſs: hence our college have directed the uſe of theſe only. They are ranked among the four greater hot ſeeds; and not undeſervedly looked upon as good ſtomachics and carminatives. An eſſential oil [*E.*] and ſimple water [*L.*] are prepared from them in the ſhops; they are ingredients alſo in the compound juniper water, garlic-oxymel, mithridate, theriaca, and decoction for glyſters [*L.*]

The root is far leſs warm, but has more of a ſweetiſh taſte, than the ſeeds; it is one of the five roots called openers; and has ſometimes been directed in aperient apozems. Boerhaave ſays, that this root agrees in taſte, ſmell, and medical qualities, with the celebrated *genſeng* of the Chineſe; from which, however, it appears to be very conſiderably different.

The leaves of fennel are weaker than either the roots or ſeeds, and have very rarely been employed for any medicinal uſe. A ſimple water is directed to be prepared from them in the Edinburgh pharmacopœia.

FŒNI GRÆCI *ſemen: Fœni græci ſativi C. B. Trigonellæ fœnigræci Lin.* Fœnugreek; the ſeeds [*L. E.*]

This plant is cultivated chiefly in the ſouthern parts of France, Germany, and in Italy; whence the ſeeds are brought to us. They are of a yellow colour, a rhomboidal figure; a diſagreable ſtrong ſmell, and a mucilaginous taſte. Their principal uſe is in cataplaſms, fomentations, and the like, and in emollient glyſters. They enter the *oleum e mucilaginibus* of the ſhops; to which they communicate a conſiderable ſhare of their ſmell.

FOLIUM INDUM, vide MALABATHRUM.

FORMICÆ. Ants; their bodies and eggs.

Theſe inſects are at preſent of no uſe with us in medicine, though formerly much celebrated for aphrodiſiac virtues, and ſtill employed in the *aquæ magnanimitatis*, and other like compoſitions of foreign diſpenſatories. It is remarkable, that theſe animals contain a truly acid juice, which they ſhed in ſmall drops upon being irritated: by infuſing a quantity of live and vigorous ants in water, an acid liquor is obtained nearly as ſtrong as good vinegar. Neumann obſerves, that on diſtilling them either with water or pure ſpirit, a clear limpid oil ariſes, which has ſcarce any taſte, or at leaſt is not hot or pungent like the eſſential oils of vegetables.

FRAGARIÆ *folia, fructus: Fragariæ ferentis fragra rubra J. B.* The ſtrawberry buſh; its leaves and fruit [*E.*]

The leaves are ſomewhat ſtyptic, and bitteriſh; and, hence, may be of ſome ſervice in debility and laxity of the viſcera; and immoderate ſecretions, or a ſuppreſſion of the natural evacuations, depending thereon: they are recommended in hæmorrhages and fluxes; and likewiſe as aperients, in ſuppreſſions of urine, obſtructions of the viſcera, in the jaundice, &c. The fruit is in general very grateful both to the palate and ſtomach: like other fruits of the dulco-acid kind, they abate heat, quench thirſt, looſen the belly, and promote urine; but do not afford much nouriſhment. Geoffroy obſerves, that the urine of thoſe who eat liberally of this fruit, becomes impregnated with its fragrant ſmell.

FRANGULA, vide ALNUS NIGRA.

FRAXINELLÆ, *ſeu Dictamni albi, radix: Dictamni vulgo ſive fraxinellæ C. B.* White or baſtard dittany; the root [*E.*]

This plant grows wild in the mountanous parts of France, Italy, and Germany; whence the cortical part of the root, dried and rolled,

rolled up into quills, is ſometimes brought to us. This is of a white colour; a weak, not very agreeable ſmell; and a durable bitter, lightly pungent taſte. It is recommended as an alexipharmac; but not regarded by common practice, nor often kept in the ſhops.

FRAXINI *cortex et ſemen: Fraxini excelſioris C. B. Fraxini vulgatioris J. B.* The aſh tree; its bark and ſeeds [*E.*]

The bark of this tree is moderately aſtringent, and as ſuch has ſometimes been made uſe of: the ſeeds, which are ſomewhat acrid, have been employed as aperients. There are ſo many other medicines more agreeable, and more efficacious for theſe intentions, that all the parts of the aſh tree have long been neglected.

FULIGO *lignorum combuſtorum.* Wood ſoot [*L. E.*]

This concrete is of a ſhining black colour, a diſagreeable ſmell, and an acrid, bitter, nauſeous taſte. Its chief uſe is in hyſteric caſes, in which it is ſometimes given in conjunction with the fetid gums: it gives name to a tincture of this kind in the ſhops. Its virtues are extracted both by watery and ſpirituous liquors, each of which, if the ſoot be of a good kind, diſſolve about one-ſixth. Soot is ſaid to differ greatly in quality, according to the wood from which it was produced: the more reſinous the wood, the more the ſoot abounds with oily matter.

FUMARIÆ *folia: Fumariæ officinarum et Diaſcoridis C. B.* Fumitory; the leaves [*E.*]

This is a common weed in ſhady cultivated grounds, producing ſpikes of purpliſh flowers, in May and June. It is very juicy, of a bitter taſte, without any remarkable ſmell. The medical effects of this herb are, to ſtrengthen the tone of the bowels, gently looſen the belly, and promote the urinary and other natural ſecretions. It is principally recommended in melancholic, ſcorbutic, and cutaneous diſorders; for opening obſtructions of the viſcera, attenuating and promoting the evacuation of viſcid juices. Frederick Hoffman had a very great opinion of it as a purifier of the blood; and aſſures us, that in this intention ſcarce any plant exceeds it. Both watery and ſpirituous menſtrua extract its virtues.

GALANGÆ MINORIS *radix* [*E.*] *Kempferiæ Galangæ Lin.* Galangal; a root brought from China.

This root comes to us in pieces ſcarce an inch long, and not half ſo thick, full of joints, with ſeveral circular rings on the outſide; of an aromatic ſmell, and a bitteriſh, hot, biting taſte. Galangal is a warm ſtomachic bitter: it has been frequently preſcribed in bitter infuſions, but the flavour it gives is not agreeable. The London college has rejected it from the officinal ſimples.

GALBANUM [*L. E.*]

This is the concrete juice of an African plant of the ferulaceous kind. The juice as brought to us, is ſemipellucid, ſoft, tenacious; of a ſtrong, and to ſome unpleaſant ſmell; and a bitteriſh warm taſte: the better ſort is in pale coloured maſſes, which, on being opened, appear compoſed of clear white tears. Geoffroy relates, that a dark greeniſh oil is to be obtained from this ſimple by diſtillation, which, upon repeated rectifications, becomes of an elegant ſky blue colour. The purer ſorts of galbanum are ſaid by ſome to diſſolve entirely in wine, vinegar, or water; but theſe liquors are only partial menſtrua with regard to this drug; nor do ſpirit of wine, or oils, prove more effectual in this reſpect: the beſt diſſolvent is a mixture of two parts of ſpirit of wine, and one of water. Galbanum agrees in virtue with gum ammoniacum; but is generally conſidered leſs efficacious in aſthmas, and more ſo in hyſterical complaints. It is an ingredient in the gum pills, *ſpecies e ſcordio, mithridate, theriaca, confectio Paulina,* maturating cataplaſm [*L*] and antihyſteric plaſter [*E.*]

GALLÆ [*L. E.*] Galls.

Theſe are excreſcences, found, in the warmer countries, upon the oak tree: they are produced by a kind of inſect (which wounds the young buds or branches) and afterwards they ſerve as a lodgement for its eggs: the animal within the gall eats its way through; thoſe which have no hole are found to have the inſect remaining in them. The beſt galls come from Aleppo: theſe are not quite round and ſmooth, like the other ſorts, and have ſeveral tubercles on the ſurface. Galls have a very auſtere ſtyptic taſte, without any ſmell: they are very ſtrong aſtringents, and as ſuch have been ſometimes uſed both internally and externally, but are not much taken notice of by the preſent practice.

GALLII *folia: Gallii lutei C. B. Gallii veri Lin.* Ladies bedſtraw, or cheeſe-rennet; the herb [*E.*]

This herb has a ſubacid taſte, with a very faint, not diſagreeable ſmell. The juice changes blue vegetable infuſions of a red colour, and coagulates milk, and thus diſcovers marks of acidity. It ſtands recommended as a mild ſtyptic; but has never been much in uſe.

GAMBOGIA [*L. E*] Gamboge; a ſolid concrete juice, brought from the Eaſt-Indies, in large cakes or rolls. The beſt ſort is of a deep yellow or orange colour, and breaks ſhining and free from droſs. It has no ſmell, and very little taſte, unleſs kept in the mouth for ſome time; when it impreſſes a ſlight ſenſe of acrimony. It immediately communicates to ſpirit of wine a bright golden colour, and almoſt entirely diſſolves in it; Geoffroy ſays, except the ſixth part: alkaline ſalts enable water to act upon this ſubſtance powerfully as a menſtruum: the ſolution made by their means is ſomewhat tranſparent, of a deep blood-red colour, and paſſes the filtre: the dulcified ſpirit of ſal ammoniac readily and entirely diſſolves it, and takes up a conſiderable quantity; and, what is remarkable, this ſolution mixes either with water or ſpirit, without growing turbid.

Gamboge evacuates powerfully both upwards and downwards. Hoffman and ſome others condemn it as acting with too great violence, and occaſioning dangerous hypercatharſes; whilſt others are of a contrary opinion. Geoffroy ſeems particularly fond of this medicine, and informs us, that he has frequently given it, from two to four grains, without its proving at all emetic; that from four to eight grains, it both vomits and purges, without violence; that its operation is ſoon over; and that if given in a liquid form, and ſufficiently diluted, it ſtands not in need of any corrector; that in the form of a bolus or pill, it is moſt apt to prove emetic, but very rarely has this effect if joined with *mercurius dulcis.* He nevertheleſs cautions againſt its uſe where the patient cannot eaſily bear vomiting. It gives name to a pill in the Edinburgh pharmacopœia, but is not uſed in any compoſition of the London.

GENISTÆ *folia, flores, ſemen: Cytiſo geniſtæ ſcopariæ vulgaris flore luteo Tourn. Spartii ſcoparii Lin.* Broom; the leaves, flowers, and ſeeds [*E.*]

The leaves of this ſhrub have a nauſeous bitter taſte: decoctions of them looſen the belly, promote urine, and ſtand recommended in hydropic caſes.

The flowers are ſaid to prove cathartic in decoction, and emetic in ſubſtance, though in ſome places, as Lobel informs us, they are commonly uſed, and in large quantity, in ſalads, without producing any effect of this kind. The qualities of the ſeeds are little better determined: ſome report, that they purge almoſt as ſtrongly as hellebore, in the doſe of a dram and half; whilſt Lobel relates, that he has given a decoction of two ounces of them as a gentle emetic.

GENTIANÆ *radix: Gentianæ majoris luteæ C. B.* Gentian; the root [*L. E.*]

This plant is found wild in ſome parts of England: but the dried roots are moſt commonly brought from Germany, &c. they ſhould be choſen freſh, and of a yellow or bright gold colour within. This root is a ſtrong bitter, and as ſuch, very frequently made uſe of in practice: in taſte it is leſs exceptionable than moſt of the other ſubſtances of this claſs; infuſions of it, flavoured with orange peel, are ſufficiently grateful. It is the capital ingredient in the bitter wine, tincture, and infuſion of the ſhops. An extract made from it is likewiſe an officinal preparation.

A poiſonous root was ſome years ago diſcovered among ſome of the gentian brought to London; the uſe of which occaſioned violent diſorders, and in ſome inſtances death. This is eaſily diſtinguiſhable by its being internally of a white colour, and void of bitterneſs. This poiſonous ſimple ſeems to be the root of the *thora valdenſis* of Ray, the *anconitum primum pardalianches* of Geſner; a plant with which, Lobel informs us, the inhabitants of ſome parts of the Alps uſed formerly to empoiſon darts.

* GEOFFRÆÆ *cortex: Geoffrææ Jamaicenſis inermis* D^ris^ *Wright. Geoffrææ Pharm. Eding.* Cabbage Bark, or Worm-Bark tree.

This is a tree growing abundantly in the low ſavannahs of Jamaica, of a conſiderable height, but no great thickneſs. It has a ſtraight ſmooth trunk, and ſends off its branches near the top. Its leaves are of a dark green, its flowers are roſe-coloured and of the papilionaceous kind, ſet in purple flower-cups. Theſe are ſucceeded by a green hard fruit, of the ſize of a plum, having a ſkin the thickneſs of a crown piece, and a nut within.

The bark of this tree is externally of a grey colour, black and furrowed on the inſide. Its taſte is mucilaginous and ſweetiſh; its ſmell diſagreeable. It has long been celebrated as an anthelmintic in the Weſt-Indies, and has lately been introduced into European practice.

This bark is uſed in decoction, ſyrup, powder and extract. For making the decoction, an ounce of freſh-dried bark is to be boiled gently in a quart of water, till the liquor be of the colour of Madeira wine; and then to be ſtrained off for uſe. The decoction is preferred in Jamaica, and ſeems to be the moſt efficacious as an anthelmintic.

Mr. Anderſon, who has written a paper concerning this bark, in the Medical Commentaries, recommends its exhibition in gradually augmented doſes of the decoction, for eight or nine mornings ſucceſſively, and then a doſe of jalap and calomel, which ſeldom fails to bring away the worms.

GINSENG [*E.*] *Panacis quinquefolii Lin.* A ſmall root brought from North America, and ſometimes from China: an inch or two in length, taper, finely ſtriated, of a whitiſh or yellowiſh colour. It has a very ſweet taſte, accompanied with a ſlight bitteriſhneſs and warmth.

The Chineſe are ſaid to have a very extraordinary opinion of the virtues of this root, and to look upon it as an univerſal reſtorative, in all decays from age, intemperance, or diſeaſe. The great value, there ſet upon it, has prevented its being exported into other countries, and its diſcovery in North America is but of late date, ſo that among us it has hitherto been very rarely made uſe of; although, from what can be judged of it by the taſte, it ſeems to deſerve ſome regard, eſpecially as it is now procurable in plenty.

GITH, vide NIGELLA.

GLADIOLI LUTEI *radix: Iridis paluſtris, luteæ, ſive acori adulterini J. B. Acori vulgaris pharm. Auguſt. et Wirt. Iridis Pſeudo Acori Lin.* Yellow water-flag, baſtard acorus, or water flower de luce; the roots [*L.*]

This grows common by the brinks of rivers and in other watery places. The root has a very acrid taſte, and proves, when freſh, a ſtrong cathartic: its expreſſed juice, given to the quantity of eighty drops every hour or two, and occaſionally increaſed, has occaſioned a plentiful evacuation, after jalap, gamboge, &c. had proved ineffectual (ſee the Edinburgh Eſſays, vol. v. art. 8. Abridg. vol. i. page 202.) By drying, it loſes its acrimony and purgative virtue. The *pulvis ari* of our diſpenſatory contains about one-fifth of the dry root; the Edinburgh diſpenſatory uſes in its place the *acorus verus*, or *calamus aromaticus*.

GLYCYRRHIZÆ *radix: Glycyrrhizæ ſiliquoſæ vel Germanicæ C. B. Glycyrrhizæ glabræ Lin* Liquorice; the root [*L. E.*]

This is produced plentifully in all the countries of Europe. That which is the growth of our own is preferable to ſuch as comes from abroad; the latter being generally mouldy, which this root is very apt to become, unleſs kept in a dry place. The powder of liquorice, uſually ſold, is often mingled with flour, and I fear too often with ſubſtances not quite ſo wholeſome: the beſt ſort is of a browniſh yellow colour (the fine pale yellow being generally ſophiſticated) and of a very rich ſweet taſte, much more agreeable than that of the freſh root. Liquorice is almoſt the only ſweet that quenches thirſt; whence it was called by the Greeks *adipſon*. Galen takes notice, that it was employed in this intention in hydropic caſes, to prevent the neceſſity of drinking. Mr. Fuller, in his *Medicina gymnaſtica*, recommends this root as a very uſeful pectoral, and ſays it excellently ſoftens acrimonious humours, at the ſame time that it proves gently detergent: and this account is warranted by experience. It is an ingredient in the pectoral ſyrup, pectoral troches, the compound lime waters, decoction of the woods, compound powder of gum tragacanth, lenitive electary, and theriaca. An extract is directed to be made from it in the ſhops, but this preparation is brought chiefly from abroad, though the foreign extract is not equal to ſuch as is made with proper care among ourſelves.

GRAMINIS CANINI *radix: Graminis canini arvenſis, ſive graminis Dioſcoridis C. B. Tritici repentis Lin.* Quick-graſs: the roots.

Graſs roots have a ſweet roughiſh taſte. They are principally recommended in aperient ſpring drinks, for what is called purifying and ſweetening the blood.

GRANA PARADISI: *Cardamomum majus ſemini piperato Geoffroii. Amomum Grana Paradiſi Lin.* Grains of paradiſe: a fruit brought from the Eaſt Indies [*E.*]

This fruit is about the ſize of a fig, divided internally into three cells, in each of which are contained two rows of ſmall ſeeds like cardamoms. Theſe ſeeds are ſomewhat more grateful, and conſiderably more pungent, than the common cardamoms, approaching in this reſpect to pepper, with which they agree alſo in their pharmaceutical properties: their pungency reſiding, not in the diſtilled oil, as that of cardamom ſeeds does, but in the reſin extracted by ſpirit of wine.

GRANATI *cortex: Fructûs Mali punicæ ſativæ C. B.* The rind of the pomegranate, called *malicorium* [*L. E.*]

The pomegranate tree is ſometimes met with in our gardens, but the fruit, for which it is chiefly valued, rarely comes to ſuch perfection as in warmer climates. The fruit has the general qualities of the other ſweet ſummer fruits, allaying heat, quenching thirſt, and gently looſening the belly. This rind is a ſtrong aſtringent, and as ſuch is occaſionally made uſe of.

GRATIOLÆ *folia: Gratiolæ centaurioidis C. B. Gratiolæ officinalis Lin.* Hedge hyſſop; the leaves [*E.*]

This is a ſmall plant, met with, among us, only in gardens. The leaves have a very bitter, diſagreeable taſte: an infuſion of a handful of them when freſh, or a dram when dried, is ſaid to operate ſtrongly as a cathartic. Kramer reports (*Tentam. botanic.* p. 18.) that he has found the *root* of this plant a medicine ſimilar in virtue to ipecacuanha.

GUAIACI *lignum, cortex, gummi: Guaiaci Americani primi fructu aceris, ſive legitimi Breyn. prodr. Guaiaci officinalis Lin.* Guaiacum, a tree growing in the warmer parts of the Spaniſh Weſt-Indies; its wood, bark, and reſin called gum guaiacum [*L. E.*]

The wood is very ponderous, of a cloſe compact texture; the outer part is of a yellow colour, the heart of a deep blackiſh green, pale, and brown colours: the bark is thin, ſmooth, externally of a dark greyiſh hue: both have a lightly aromatic, bitteriſh, pungent taſte; the bark is ſomewhat the weaker. The reſin (which exudes from inciſions made in the trunk of the tree) is brought to us in irregular maſſes, uſually friable, of a duſky greeniſh, and ſometimes of a reddiſh caſt, with pieces of the wood among them: its taſte is more acrid and pungent than that of the wood or bark.

Their general virtues are thoſe of a warm ſtimulating medicine: they ſtrengthen the ſtomach and other viſcera; and remarkably promote the urinary and cuticular diſcharge: hence in cutaneous defedations, and other diſorders proceeding from obſtructions of the excretory glands, and where ſluggiſh ſerous humours abound, they are eminently uſeful; rheumatic and other pains have often been relieved by them. The reſin is the moſt active of theſe drugs; and the efficacy of the others depends upon the quantity of this part contained in them: the reſin is extracted from the wood in part by watery liquors, but much more perfectly by ſpirituous ones; the watery extract of this wood, kept in the ſhops, proves not only leſs in quantity, but conſiderably weaker than one made with ſpirit. This latter extract is of the ſame quality with the native reſin, and differs from that brought to us only in being purer. The gum or extracts, are given from a few grains to a ſcruple or half a dram: which latter doſe proves for the moſt part conſiderably purgative. The officinal preparations of guaiacum are an extract of the wood [*L.*] a ſolution of the gum in rectified ſpirit of wine [*L.*] and a ſolution in volatile ſpirit [*L. E.*] as alſo an empyreumatic oil diſtilled from the wood. The wood is an ingredient in the compound lime water [*L. E.*] and in the compound tinctures of jalap and ſena [*E.*] of which it increaſes the purgative virtue; the gum, in the aromatic pills [*L.*] ecphractic pills [*L. E.*] mercurial and ethiopic pills, Edinburgh theriaca [*E.*] and the compound oil of balſam of Copaiba [*L.*]

GUMMI AMMONIACUM, vide AMMONIACUM.

GUMMI ARABICUM [*L. E.*] *Ex Mimoſa nilotica Lin.* Gum Arabic; a concrete gum, exuding from the Egyptian acacia tree. This is brought to us from Turkey, in ſmall irregular maſſes or ſtrings, of a pale yellowiſh colour. The true gum Arabic is rarely to be met with in the ſhops; gum ſenega or ſenica, which comes from the coaſt of Guinea, being uſually ſold for it: this greatly reſembles the other, and perhaps, as Dale conjectures, exudes from a tree of the ſame kind: it is generally in large pieces, rough on the outſide; and in theſe circumſtances poſſibly conſiſts the only difference betwixt the two; although the former is held to be the purer and finer gum, and therefore preferred for medicine; and the latter the ſtronger, more ſubſtantial and cheaper, and conſequently more employed for mechanic uſes. The virtues of this gum are the ſame with thoſe of gummy and mucilaginous ſubſtances in general: it is given, from a ſcruple to two drams, in hoarſeneſſes, a thin acrimonious ſtate of the juices, and where the natural mucus of the inteſtines is abraded. It is an ingredient in the white decoction, chalk julep, the compound powders of bole, ſcordium, amber, gum tragacanth, the common emulſion, mithridate, theriaca, and ſome of the troches.

GUMMI CERASORUM, Cherry-tree gum.

There is not any medical difference betwixt this and the preceding. Some have ſuppoſed that all the gum brought to us from the Eaſt, under the name of *Arabic*, is no other than the gum of cherry, plum, and other trees common among ourſelves. This opinion is nevertheleſs erroneous; for theſe trees, as Geoffroy obſerves, do not grow in the countries whence gum Arabic is brought; whilſt the *acaciæ* are very common there.

GUMMI ELEMI, vide ELEMI.

GUMMI TRAGACANTHÆ [*L. E.*] *Ex Aſtragolo Tragacantha Lin.* The gum of the tragacanth, a thorny buſh growing in Crete, Aſia, and Greece. This gum is of a much ſtronger body than either of the foregoing, and does not ſo perfectly diſſolve in water. A dram will give a pint of water the conſiſtence of a ſyrup, which a whole ounce of gum Arabic is ſcarce ſufficient to do. Hence its uſe for forming troches, and the like purpoſes, in preference to the other gums. It gives name to an officinal powder, and is an ingredient in the compound powders of ceruſs and amber.

GUTTA GAMBA, vide GAMBOGIA.

HÆMATITES *lapis* [*L. E.*] Hematites, or bloodſtone.

This is an elegant iron ore, extremely hard, of a dark reddiſh or yellowiſh colour: it is found either along with the other ores of iron, or in diſtinct mines by itſelf. With regard to its medical virtues, we conceive they do not vary from thoſe experienced from ruſt, and the common croci of iron, notwithſtanding the extraordinary opinion which many have entertained of it; as of its curing ulcers of the lungs, which Geoffroy ſays hæmatites dries and heals.

HALICACABUM, vide ALKEKENGI.

HEDERÆ ARBOREÆ *folia, Baccæ, et gummi ſeu reſina: Hederæ communis majoris Raii. Hederæ Helicis Lin.* Ivy; the leaves, berries, and reſin called gum hederæ [*E.*]

This is a climbing ſhrubby plant, growing commonly from the trunks of trees, or on old walls. The leaves have very rarely been given internally, notwithſtanding they are recommended (in the *Ephem. natur. curioſ.* vol. ii. obſ. 120.) againſt the atrophy of children: their taſte is nauſeous, acrid, and bitter. Externally they have ſometimes been employed for drying and healing ichorous ſores, and likewiſe for keeping iſſues open. The berries were ſuppoſed by the ancients to have a purgative and emetic quality: later writers have recommended them in ſmall doſes, as diaphoretics and alexipharmacs; and Mr. Boyle tells us, that in the London plague the powder of them was given with vinegar, with good ſucceſs, as ſudorific. It is probable the virtue of the compoſition was rather owing to the vinegar than to the powder. The reſin was ranked by the ancients, (if their ᾽ά τȣ̃ κισσȣ̃ was the ſame with our *gummi hederæ*) among the depilatories; from this claſs, to which it certainly had no title, it has ſince been removed to that of conglutinaters of wounds, to which it has no very juſt one.

HEDERÆ TERRESTRIS *folia: Hederæ terreſtris vulgaris C. B. Glecomæ hederaceæ Lin.* Ground-ivy; the leaves [*E.*]

Ground-ivy is a low plant, frequent in hedges and ſhady places. It has an aromatic, though not very agreeable ſmell; and a quick, bitteriſh, warm taſte. This herb is an uſeful corroborant, aperient, and detergent; and hence ſtands recommended againſt laxity, debility, and obſtructions of the viſcera:

ſome have had a great opinion of it for cleanſing and healing ulcers of the internal parts, even of the lungs; and for purifying the blood. It is cuſtomary to infuſe the dried leaves in malt liquors; a practice not to be commended, though it readily communicates its virtue, and likewiſe helps to fine them down: ſcarce any other herb has this effect more remarkably than ground ivy.

HELENIUM, vide ENULACAMPANA.

HELLEBORI ALBI *radix: Hellebori albi flore ſubviridi C. B. Veratri albi Lin.* White hellebore; the root [*L. E.*]

This plant grows ſpontaneouſly in Swiſſerland, and the mountainous parts of Germany. The root has a nauſeous, bitteriſh, acrid taſte, burning the mouth and fauces: wounded when freſh, it emits an extremely acrimonious juice, which mixed with the blood, by a wound, is ſaid to prove very dangerous: the powder of the dry root, applied to an iſſue, occaſions violent purging: ſnuffed up the noſe, it proves a ſtrong, and not always a ſafe ſternutatory. This root, taken internally, acts with extreme violence as an emetic, and has been obſerved, even in a ſmall doſe, to occaſion convulſions, and other terrible diſorders. The ancients ſometimes employed it in very obſtinate caſes, and always made this their laſt reſource. Modern practice ſeems to have almoſt entirely rejected its internal uſe, though I am informed that ſome have lately ventured upon ſo large a doſe as a ſcruple, in maniacal caſes, and found good effects from it, after the ſtronger antimonial preparation had been given in vain. A tincture and honey of it are kept in the ſhops [*L.*]

HELLEBORI NIGRI *radix: Hellebori nigri flore roſeo C. B.* Black hellebore; the roots [*L. E.*]

This plant grows wild in the mountainous parts of Swiſſerland, Auſtria, and Stiria: the earlineſs of its flowers, which ſometimes appear in December, has gained it a place in our gardens.

In ſome parts of Germany, a ſpecies of black hellebore has been made uſe of, which not unfrequently produces violent, and ſometimes deleterious effects: this the Wirtemberg college particularly caution againſt, though without mentioning any marks by which it may be diſtinguiſhed, or even giving the preciſe name of the plant. It appears to be the fetid black hellebore of *C. B.* called in England, where it grows wild, ſetterwort, ſettlewort, or baſtard hellebore. The roots of this may be diſtinguiſhed from the officinal ſort by their being leſs black. The roots of the poiſonous aconites reſemble in appearance thoſe of the black hellebore; and in the Breſlaw collections we find ſome inſtances of fatal effects occaſioned by miſtaking the former for the latter: theſe alſo are happily diſcoverable by their colour; the *aconitum* being lighter coloured than even the paleſt of the black hellebores. The faculty of Paris, by allowing the uſe of one of the paler hellebores (the green flowered, which grows wild in England, and is called by our farriers, peg-root) have in ſome meaſure deprived the ſhops of the benefit of this criterion: but the London college have directed the darkeſt coloured of all the roots of this claſs. Since therefore the two noxious roots which the buyer is moſt apt to miſtake for this, are diſtinguiſhable from it by their colour, but have no other external mark by which they may be with certainty known, particular regard ought to be had to this circumſtance; only the deepeſt black being choſen, and all the paler roots rejected.

The taſte of hellebore is acrid and bitter. Its acrimony, as Dr. Grew obſerves, is firſt felt on the tip of the tongue, and then ſpreads immediately to the middle, without being much perceived on the intermediate part: on chewing it for a few minutes, the tongue ſeems benumbed, and affected with a kind of paralytic ſtupor, as when burnt by eating any thing too hot: the fibres are more acrimonious than the head of the root from which they iſſue. Black hellebore root, taken from fifteen grains to half a dram, proves a ſtrong cathartic; and as ſuch has been celebrated for the cure of maniacal, and other diſorders, proceeding from what the ancients called *atra bilis:* in which caſes, medicines of this kind are doubtleſs occaſionally of uſe, though they are by no means poſſeſſed of any ſpecific power. It does not however appear, that our black hellebore acts with ſo much violence as that of the ancients: whence many have ſuppoſed it to be a different plant: and indeed the deſcriptions which the ancients have left us of their hellebore, do not agree with any of the ſorts uſually taken notice of by modern botaniſts. Another ſpecies has been diſcovered in the eaſtern countries, which Tournefort diſtinguiſhes by the name of *helleborus niger orientalis, ampliſſimo folio, caule prœalto, flore purpuraſcente,* and ſuppoſes to be the true ancient hellebore, from its growing in plenty about mount Olympus, and in the iſland Anticyra, celebrated of old for the production of this antimaniacal drug: he relates, that a ſcruple of this ſort, given for a doſe, occaſioned convulſions.

Our hellebore is at preſent looked upon principally as an alterative, and in this light is frequently employed, in ſmall doſes, for attenuating viſcid humours, promoting the uterine and urinary diſcharges, and opening inveterate obſtructions of the remoter glands: it often proves a very powerful emmenagogue in plethoric habits, where ſteel is ineffectual or improper. An extract made from this root with water, is one of the mildeſt, and for the purpoſes of a cathartic, the moſt effectual preparation of it; this operates ſufficiently, without occaſioning the irritation with which the pure reſin is accompanied. A tincture drawn with proof ſpirit, contains the whole virtue of the hellebore, and ſeems to be one of the beſt preparations of it when deſigned for an alterative: this tincture, and the extract, are kept in the ſhops. The college of Edinburgh makes this root an ingredient in the purging cephalic tincture, and compound tincture of jalap; and its extract in the purging deobſtruent pills, gamboge pills, the laxative mercurial pills, and Rudius pills, or the compound cathartic extract.

HELXINE, vide PARIETARIA.

HEPATICÆ NOBILIS *folia: Ranunculi tridentati verni, flore ſimplici cœruleo Tourn. Marchantiœ polymorphœ Lin.* Noble liver-wort; the leaves [*E.*]

This herb has a place in our gardens on account of the beauty and early appearance of its flowers. It is a cooling, gently reſtringent herb; and hence recommended in a lax ſtate of the fibres as a corroborant.

HEPATICA TERRESTRIS, vide Lichen.

HERBÆ PARIS *folia & fructus: Solani quadrifolii bacciferi C. B.* Herb Paris, true-love, or one berry; the leaves and fruit.

This is a low plant, growing wild in ſhady woods. It is ſaid, but not truly, to be alexipharmac: Geſner relates, that its juice has killed poultry: and its ſmell and taſte manifeſtly agree with thoſe of the narcotic herbs.

HERMODACTYLUS. Hermodactil; a root brought from Turkey. It is of the ſhape of a heart flatted, of a white colour, compact, yet eaſy to cut or powder; of a viſcous ſweetiſh taſte, with a light degree of acrimony.

Hermodactils were of great repute among the ancients as a cathartic; but thoſe we now meet with in the ſhops have very little purgative virtue. Neumann declares he never found them to have any effect at all.

HERNIARIÆ *folia: Polygoni minoris ſive millegranæ majoris glabræ C. B.* Rupture-wort; the leaves.

This is a low herb, growing wild in ſandy and gravelly grounds. It is a very mild reſtringent, and may, in ſome degree, be ſerviceable in diſorders proceeding from a weak flaccid ſtate of the viſcera: to the virtue for which it has been moſt celebrated, it has little title; that of curing hernias.

* HIPPOCASTANUM. *Ph. Edinb. Æſculus Hippocaſtanum Lin.* Horſe-cheſnut. The fruit of this tree, which is a trilocular capſule, containing two ſeeds in each cell, has been given as food to ſheep; and ſteeped in water, ſo as to extract its bitterneſs, is ſaid to fatten poultry. It falls ſpontaneouſly into a ſaponaceous gluten, which has been uſed inſtead of ſoap for waſhing linen. No writer mentions its medical application; but the Edinburgh college have admitted it on the recommendation of Dr. Gardiner, who ſays, that three or four grains of the powder ſnuffed up the noſtrils in the evening, operates next morning as an excellent ſternutatory, and thereby proves very beneficial in obſtinate inflammations of the eyes.

The bark of the horſe-cheſnut has been propoſed in Italy, according to Haller, as a ſubſtitute to the Peruvian bark in the cure of intermittents; and the experiment has proved ſucceſsful (*).

HIPPOSELINI *ſeu Smyrnii, folia, radix, ſemen: Hipposelini Theophraſti, vel Smyrnii Dioſcoridis, C. B.* Alexanders; the leaves, root, and ſeeds [*E.*]

This is an umbelliferous plant, differing from the others of that claſs, in bearing a large tumid black ſeed: it grows by the ſea ſide, upon rocks. In medical qualities it agrees with *apium* (ſmallage) except that the *hippoſelinum* is ſomewhat ſtronger.

HIRUNDINARIA, vide Vincetoxicum.

HORDEI *ſemen: Hordei diſtichi, quod ſpica binas ordines habeat Plinio C. B.* Common barley [*L. E.*]

HORDEUM GALLICUM *ſive* MUNDATUM. French barley, or the common barley freed from the ſhell.

HORDEUM PERLATUM *dictum* [*L.*] Pearl barley; prepared in

(*) Stirp. Helvet. L. 442.

Germany and Holland, by grinding the ſhelled barley into little round granules, which appear of a kind of pearly whiteneſs.

Barley, in its ſeveral ſtates, is more cooling, leſs glutinous, and leſs nutritious than wheat or oats; among the ancients, decoctions of it were the principal aliment, and medicine, in acute diſeaſes. The London college directs a decoction of pearl barley, and both the London and Edinburgh make common barley an ingredient in the pectoral decoction.

HORMINI SATIVI, *ſeu Sclareæ, folia, ſemen: Hormini ſclareæ dicti C. B. Salviæ ſclareæ Lin.* Garden clary; the leaves and ſeeds [*E.*]

Theſe have a warm, bitteriſh, pungent taſte; and a ſtrong, not very agreeable ſmell: the touch diſcovers in the leaves a large quantity of glutinous or reſinous matter. They are principally recommended in the fluor albus, and other female weakneſſes, in hyſteric diſorders, and in flatulent colics.

HYBERNICUS LAPIS: *Tegula vel ardeſia Hybernica* [*E.*] Iriſh ſlate.

This is a blackiſh foſſile ſtone brought from Ireland. It ſeems to conſiſt of an argillaceous or bolar earth, ſlightly impregnated with ſulphur and iron; and may be preſumed to poſſeſs in a low degree the virtues of the other ferrugineous minerals.

HYDRARGYRUS, vide ARGENTUM VIVUM.

HYDROLAPATHUM, vide LAPATHUM.

HYOSCYAMI *folia: Hyoſcyami albi majoris vel tertii Dioſcoridis et quarti Plinii C. B.* White henbane; the leaves [*E.*]

This is met with only in botanic gardens.

HYOSCYAMI NIGRI *folia: Hyoſcyami vulgaris vel nigri C. B.* The common wild, or black henbane: the leaves.

Theſe plants ſtand recommended for many external purpoſes, and by ſome likewiſe internally againſt dyſenteries and hæmorrhages: but there are ſo many examples of their pernicious effects, that common practice has very deſervedly rejected them. They are ſtrong and virulent narcotics, greatly diſorder the ſenſes, occaſioning deliria and madneſs, either deadly, or of long duration. Haller tells us of one who eat of all the poiſons of the phyſic garden, the napelli, apocyna, bello donna, without injury, but was maſtered by this; that after its common effects as a narcotic had abated, a paralyſis of one of the legs remained; and that Boerhaave had his ſenſes diſordered by only making a plaſter from this plant. There are other examples alſo, though from leſs unexceptionable authorities, of henbane's proving narcotic, though none of it was received into the body.

HYPERICI *folia, flores, ſemen: Hyperici vulgaris, C. B.* St. John's wort; the leaves, flowers [*L. E.*] and ſeeds [*E.*]

This plant grows wild in woods and uncultivated places throughout England. Its taſte is rough and bitteriſh; the ſmell diſagreeable. Hypericum has long been celebrated as a corroborant, diuretic, and vulnerary; but more particularly in hyſterical and maniacal diſorders: it has been reckoned of ſuch efficacy in the latter, as to have thence received the name of *fuga dæmonum.* It is obſervable, that the flowery tops tinge expreſſed oils of a red colour (which very few vegetable ſubſtances will do) and communicate a blood-red to rectified ſpirit. The oil tinged by them is kept in the ſhops [*L.*]

HYPOCISTIDIS *ſuccus inſpiſſatus: Hypociſtidis ſub ciſto C. B. Aſari Hypociſtidis Lin.* Juice of hypociſtis [*L. E.*]

Hypociſtis is a fleſhy production, growing in the warmer climates from the roots of different kinds of ciſti. Its inſpiſſated juice is an aſtringent, ſimilar to acacia, but ſomewhat ſtronger. At preſent it is ſcarce otherwiſe made uſe of than as an ingredient in ſome of the old compoſitions, viz. mithridate, theriaca, and the compound powder of amber [*L.*]

HYSSOPI *folia: Hyſſopi officinarum cæruleæ ſive ſpicatæ C. B.* Hyſſop; the leaves [*L. E.*]

The leaves of hyſſop have an aromatic ſmell, and a warm pungent taſte. Beſides the general virtues of aromatics, they are particularly recommended in humoral aſthmas, coughs, and other diſorders of the breaſt and lungs; and ſaid to promote expectoration. A ſimple water is prepared from them in the Edinburgh pharmacopœia.

JACOBÆÆ *folia: Jacobææ vulgaris laciniatæ C. B. Senecionis Jacobææ Lin.* Ragwort, or ſeggrum; the leaves.

This ragged-leaved plant grows wild by road ſides, and uncultivated places. Its taſte is roughiſh, bitter, pungent, and extremely unpleaſant: it ſtands ſtrongly recommended by Simon Paulli againſt dyſenteries; but its forbidding taſte has prevented its coming into practice.

JALAPIUM [*L. E.*] *Convolvuli Jalapæ Lin.* Jalap.

Jalap is the root of an American convolvulus, brought to us in thin tranſverſe ſlices, from Xalapa, a province of New Spain. Such pieces ſhould be choſen as are moſt compact, hard, weighty, dark coloured, and abound moſt with black circular ſtriæ. Slices of briony root are ſaid to be ſometimes mixed with thoſe of jalap: theſe may be eaſily diſtinguiſhed by their whiter colour, and leſs compact texture. This root has no ſmell, and very little taſte upon the tongue; but when ſwallowed, it affects the throat with a ſenſe of heat, and occaſions a plentiful diſcharge of ſaliva.

Jalap in ſubſtance, taken in a doſe of about half a dram (leſs or more, according to the circumſtances of the patient) in plethoric, or cold phlegmatic habits, proves an effectual, and in general a ſafe purgative, performing its office mildly, ſeldom occaſioning nauſea or gripes, which too frequently accompany the other ſtrong cathartics. In hypochondriacal diſorders, and hot bilious temperaments, it gripes violently, if the jalap be good; but rarely takes due effect as a purge. An extract, made by water, purges almoſt univerſally, but weakly; and at the ſame time, has a conſiderable effect by urine: the root remaining after this proceſs, gripes violently. The pure reſin, prepared by ſpirit of wine, occaſions moſt violent gripings, and other terrible ſymptoms, but ſcarce proves at all cathartic: triturated with ſugar, or with almonds into the form of an emulſion, or diſſolved in ſpirit and mixed with ſyrups, it purges plentifully in a ſmall doſe, without occaſioning much diſorder: the part of the jalap remaining after the ſeparation of the reſin, yields to water an extract, which has no effect as a cathartic, but operates powerfully by urine. Its officinal preparations are an extract made with water and ſpirit [*L. E.*] a reſin [*E.*] a ſimple tincture [*L. E.*] and a compound tincture [*E.*] The extract is the baſis of one of the purgative pills [*E.*]

Frederick Hoffman particularly cautions againſt giving this medicine to children, and aſſures us, that it will deſtroy appetite, weaken the body, and perhaps occaſion even death. In this point, this celebrated practitioner was probably deceived: children, whoſe veſſels are lax, and the food ſoft and lubricating, bear theſe kinds of medicines, as Geoffroy obſerves, better than adults.

JAPONICA TERRA *ſive catechu* [*L. E.*] Japan earth, improperly ſo called; being neither an earth, nor the produce of Japan; but an inſpiſſated vegetable juice, prepared in the Eaſt-Indies from the fruit, as is ſuppoſed, of the areca palm tree. It is dry and pulverable, outwardly of a reddiſh colour, inwardly of a ſhining dark brown, almoſt black, with ſome caſt of red. When pure, it diſſolves totally in water, and almoſt totally in rectified ſpirit. As we uſually meet with it, a conſiderable quantity of ſandy matter is left by both theſe menſtrua. This medicine is a mild aſtringent, and frequently employed as ſuch in alvine fluxes, uterine profluvia, in laxity and debility of the viſcera in general, and in coughs proceeding from thin acrid defluxions. Its taſte is more agreeable than that of moſt other ſubſtances of this claſs; chewed for ſome time, it leaves a kind of ſweetiſhneſs in the mouth. The troches and tincture, kept in the ſhops, are very elegant preparations of it. It gives name to an officinal confection [*E.*] and is an ingredient in the compound powder of amber, mithridate, and theriaca [*L.*]

JASMINI *flore: Jaſmini vulgatioris flore albo C. B.* Jaſmine; the flowers.

This is a ſmall tree, commonly planted in our gardens. The flowers have a ſtrong ſmell, which is liked by moſt people; expreſſed oils extract their fragrance by infuſion; and water elevates ſomewhat of it in diſtillation, but no eſſential oil has hitherto been obtained from them: the diſtilled water, kept for a little time, loſes its odour. As to their medical virtues, the preſent practice expects not any from them, notwithſtanding they have been recommended for promoting delivery, curing ulcerations of the uterus, &c.

IBERIDIS *folia: Lepidii gramineo folio ſive iberidis Tourn.* Sciatica creſſes; the herb.

This is met with in botanic gardens: in taſte, ſmell, and medical virtues, it agrees with the naſturtium. It has been particularly recommended in external applications againſt the ſciatica, whence the Engliſh name of the plant.

ICHTHYOCOLLA [*E.*] Fiſh-glue, or iſing-glaſs.

This is a ſolid glutinous ſubſtance, obtained from a large kind of fiſh, caught in the ſeas of Muſcovy. The ſkin, and ſome other parts of the animal, are boiled in water, the decoction inſpiſſated to a proper conſiſtence, and then poured out ſo as to form thin cakes; theſe are either further exſiccated till perfectly dry, or cut whilſt ſoft into ſlices, which are afterwards bent, or rolled up into ſpiral, horſeſhoe, and other ſhapes. This glue is more employed for mechanic purpoſes than in medicine. It may be given in a thin acrimonious ſtate of the juices, after the ſame manner as the vegetable gums and mucilages; regard being had to their different diſpoſition to putreſcence.

IMPERATORIÆ *ſeu Magiſtrantiæ radix: Imperatoriæ majoris C. B. Imperatoræ Aſtrutii Lin.* Maſterwort; the root [*E.*]

This is a native of the Alps and Pyrenean mountains, and ſome parts of Germany, whence we are ſupplied with roots ſuperior in aromatic flavour to thoſe raiſed in our gardens. The ſmell of this root is very fragrant; its taſte bitteriſh, warm, and pungent, glowing in the mouth for a long time after it has been chewed. This ſimple, though undoubtedly an elegant aromatic, is not regarded in the preſent practice: it is ſcarcely ever directed in extemporaneous preſcription, and the only officinal compoſition it has a place in, is the plague water of the Edinburgh pharmacopœia. Its flavour is ſimilar to that of angelica, but ſtronger.

IPECACUANHA [*L. E.*] *Radix Pſycotriæ emetica Lin.* A root brought from the Spaniſh Weſt-Indies.

It is divided into two ſorts, Peruvian and Brazilian: but the eye diſtinguiſhes three, aſh-coloured or grey, brown, and white. The aſh-coloured, or Peruvian ipecacuanha of the ſhops, is a ſmall wrinkled root, bent and contorted into a great variety of figures, brought over in ſhort pieces, full of wrinkles, and deep circular fiſſures, quite down to a ſmall white woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, looks ſmooth and reſinous upon breaking: it has very little ſmell; the taſte is bitteriſh and ſubacrid, covering the tongue, as it were, with a kind of mucilage. The brown is ſmall, and ſomewhat more wrinkled than the foregoing, of a brown or blackiſh colour without, and white within; this is brought from Brazil. The white ſort is woody, has no wrinkles, and no perceptible bitterneſs in taſte. The firſt ſort (the aſh-coloured or grey ipecacuanha) is that uſually preferred for medicinal uſe. The brown has been ſometimes obſerved, even in a ſmall doſe, to produce violent effects. The white, though taken in a large one, has ſcarce any effect at all: Mr. Geoffroy calls this ſort baſtard ipecacuanha, and complains that is is an impoſition upon the public. To what ſpecies of plant the ipecacuanha belongs, has not as yet been determined. Geoffroy, Neumann, Dale, and Sir Hans Sloane, inform us, that the roots of a kind of apocynum (dog's bane) are too frequently brought over inſtead of it: and inſtances are given of ill conſequences following from the uſe of theſe roots. If the marks above laid down, particularly the aſh colour, bitterneſs, deep wrinkles, and bitteriſh taſte, be carefully attended to, all miſtakes of this kind may be prevented.

Ipecacuanha was firſt brought into Europe about the middle of the laſt century, and an acconnt of it publiſhed about the ſame time by Piſo; but it did not come into general uſe till about the year 1686, when Helvetius, under the patronage of Lewis XIV. introduced it into practice. This root is one of the mildeſt and ſafeſt emetics we are acquainted with; and has this peculiar advantage, that if it ſhould not operate by vomit, it paſſes off by the other emunctories. It was firſt introduced among us with the character of an almoſt infallible remedy in dyſenteries, and other inveterate fluxes; as alſo in diſorders proceeding from obſtructions of long ſtanding: nor has it loſt much of its reputation by time. In dyſenteries, it almoſt always produces happy effects, and often performs a cure in a very ſhort ſpace of time. In other fluxes of the belly, in beginning dyſenteries, and ſuch as are of a malignant kind, or where the patient breathes a tainted air, it has not been found equally ſucceſsful. In theſe caſes, it is neceſſary to continue the uſe of this medicine for ſeveral days, and to join with it opiates, diaphoretics, and the like. This root, given in ſubſtance, is as effectual, if not more ſo than any of the preparations of it: the pure reſin acts as a ſtrong irritating emetic, but is of little ſervice in dyſenteries; whilſt an extract prepared with water is almoſt of equal ſervice in theſe caſes with the root itſelf, though it has little effect as an emetic. Geoffroy concludes hence, that the chief virtue of ipecacuanha in dyſenteries depends upon its gummy ſubſtance, which lining the inteſtines with a ſoft mucilage, when their own mucus has been abraded, occaſions their exulcerations to heal, and defends them from the acrimony of the juices: and that the reſinous part, in which the emetic quality reſides, is required, where the morbific matter is lodged in the glands of the ſtomach and inteſtines. But if the virtues of this root were entirely owing to its mucilaginous, or gummy part, pure gums, or mucilages, might be employed to equal advantage. Water, aſſiſted by a boiling heat, takes up from all vegetables a conſiderable portion of reſinous along with the gummy matter. If the ipecacuanha remaining after the action of water be digeſted with pure ſpirit, it will not yield half ſo much reſin as at firſt: ſo that the aqueous extract differs from the crude root only in degree, being proportionably leſs reſinous, and having leſs effect, both as an emetic, and in the cure of dyſenteries. The virtues of ipecacuanha, in this diſorder, depend upon its promoting perſpiration, the freedom of which is here of the utmoſt importance, and an increaſe of which, even in an healthful perſon, is generally obſerved to ſuppreſs the evacuation by ſtool. In dyſenteries, the ſkin is for the moſt part dry and tenſe, and perſpiration obſtructed: the common diaphoretics paſs off without effect through the inteſtinal canal: but ipecacuanha, if the patient, after a puke or two, be covered up warm, brings on a plentiful ſweat. After the removal of the dyſentery, it is neceſſary to continue the uſe of the medicine for ſome time longer, in order to prevent a relapſe. For this purpoſe, a few grains, divided into ſeveral doſes, ſo as not to occaſion any ſenſible evacuation, may be exhibited every day; by which means the cure is effectually eſtabliſhed. And indeed ſmall doſes given, even from the beginning, have been often found to have better effects in the cure of this diſeaſe than larger ones. Geoffroy informs us, from his own experience, that he has obſerved ten grains of the powder to act as effectually as a ſcruple or two; and therefore confines the doſe betwixt ſix and ten grains: it has lately been found, that even ſmaller doſes prove ſufficiently emetic. The only officinal preparation of this root is a tincture made in wine [*L. E*].

IRIDIS FLORENTINÆ *radix : Iridis Florentinæ albæ C. B.* Florentine orris ; the root.

IRIDIS PURPUREÆ NOSTRATIS *radix : Iridis vulgaris Germanicæ ſive ſylveſtris C. B.* Flower-de-luce ; the root [*E.*]

Both theſe appear to be the ſame ſpecies of plant : ſeveral varieties of it are cultivated in our gardens on account of the elegance of their flowers. The roots, when recent, have a bitter, acrid, nauſeous taſte, and taken into the body prove ſtrongly cathartic ; and hence the juice is recommended in dropſies, in a doſe of three or four ſcruples. By drying they loſe this quality, yet ſtill retain a ſomewhat pungent, bitteriſh taſte : their ſmell in this ſtate is of the aromatic kind ; thoſe produced in the warmer climates have a very grateful flavour, approaching to that of March violets : hence the uſe of the Florentine iris in perfumes, and for flavouring liquors : the ſhops employ it in the white pectoral troches [*L. E.*] and as an ingredient in the theriaca [*L.*] pectoral decoction, and pectoral oxymel [*E.*]

IVA ARTHRITICA, vide CHAMÆPITYS.

JUJUBÆ, *Fructus Rhamni Zizyphi Lin.* Jujubes ; a half-dried fruit brought from France.

Jujubes have a pleaſant ſweet taſte. They are recommended in an acrimonious ſtate of the juices ; in coughs from thin ſharp defluxions ; and in heat of urine: but they are at preſent, among us, ſtrangers to medicinal practice, and to the ſhops.

JUNCUS ODORATUS : *Juncus odoratus ſive aromaticus C. B. Andropogon Schœnanthus Lin.* Sweet ruſh, or camels hay [*L.*]

This is a dry ſmooth ſtalk, brought to us along with the leaves, and ſometimes the flowers, from Turkey and Arabia, tied up in bundles about a foot long. The ſtalk, in ſhape and colour, ſomewhat reſembles a barley ſtraw : it is full of a fungous pith, like thoſe of our common ruſhes : the leaves are like thoſe of wheat, and ſurround the ſtalk with ſeveral coats, as in the reed : the flowers are of a carnation colour, ſtriped with a lighter purple. The whole plant, when in perfection, has a hot bitteriſh, not unpleaſant, aromatic taſte ; and a very fragrant ſmell ; by long keeping, it loſes much of its aromatic flavour. Diſtilled with water, it yields a conſiderable quantity of eſſential oil. It was formerly often uſed as an aromatic, and in obſtructions of the viſcera, &c. but at preſent is ſcarce otherwiſe employed than as an ingredient in mithridate and theriaca.

JUNIPERI *baccæ, lignum, gummi : Juniperi vulgaris fruticoſæ C. B. Juniperi communis Lin.* Juniper; the berries [*L. E.*] wood, and the reſin (improperly called gum) which exudes from it in the warmer climates [*E.*]

This is an evergreen ſhrub, growing upon heaths and hilly grounds in all the parts of Europe : the wood and reſin are not at preſent made uſe of for medicinal purpoſes : the berries are brought from Holland, where this ſhrub is very plentiful.

Juniper berries have a ſtrong, not diſagreeable ſmell ; and a warm, pungent, ſweet taſte, which if they be long chewed, or previouſly well bruiſed, is followed by a bitteriſh one. The pungency ſeems to reſide in the bark ; the ſweet in the juice ; the aromatic flavour in oily veſicles, ſpread through the ſubſtance of the pulp, and diſtinguiſhable even by the eye; and the bitter in the ſeeds: the freſh berries yield, on expreſſion, a rich, ſweet, honey-like, aromatic juice; if previouſly pounded ſo as to break the ſeeds, the juice proves tart and bitter.

Theſe berries are uſeful carminatives and ſtomachics: for theſe purpoſes, a ſpirituous water [*L.*] and eſſential oil diſtilled from them [*L. E.*] are kept in the ſhops: they are ingredients alſo in the compound horſeradiſh water, tincture of jalap, tincture of ſena [*E.*] mithridate and theriaca [*L.*] The liquor remaining after the diſtillation of the oil, paſſed through a ſtrainer, and gently exhaled to the conſiſtence of a rob, proves likewiſe a medicine of great utility, and in many caſes is perhaps preferable to the oil, or berry itſelf. Hoffman is expreſsly of this opinion, and ſtrongly recommends it in debility of the ſtomach and inteſtines, and ſays it is particularly of ſervice to old people who are ſubject to theſe diſorders, or labour under a difficulty with regard to the urinary excretion: this rob is of a dark, browniſh yellow colour, a balſamic ſweet taſte, with a little of the bitter, according as the ſeeds in the berry have been more or leſs bruiſed.

KALI *folia: Kali majoris cochleato ſemine C. B. Salſolæ Sodæ Lin.* Glaſſwort; its leaves, and the alkaline ſalt called *cineres clavellati*, or potaſh [*E.*] which uſed formerly to be prepared from this plant only, but now from ſundry ſorts of woods, and other vegetable matters indifferently (ſee the article CINERES RUSSICI.) Several ſorts of theſe ſalts, differing in degree of purity and ſtrength, are to be met with in the ſhops of the dryſalter: they are rarely to be found under this denomination in thoſe of the apothecary or druggiſt.

KERMES [*L. E.*] a round grain about the bulk of a pea, found (in Spain, Italy, and in the ſouthern parts of France) adhering to the branches of the *ilex aculeata cocciglandifera C. B.*

Theſe grains appear, when freſh, full of ſmall, reddiſh ovula, or animalcules, of which they are the nidus. On expreſſion, they yield a red juice, of a bitteriſh, ſomewhat rough and pungent taſte, and a not unpleaſant ſmell: this is brought to us from the ſouth of France. The grains themſelves are cured by ſprinkling with vinegar before exſiccation: this prevents the excluſion of the ova, and kills ſuch of the animals as are already hatched; otherwiſe, they change into a winged inſect, leaving the grain an empty huſk.

Kermes, conſidered as a medicine, is a grateful, very mild reſtringent, and corroborant. In this light it was looked upon by the Greeks. The Arabians added a cordial virtue. European writers alſo have in general recommended it for exhilarating the ſpirits, and againſt palpitations of the heart; but more particularly for promoting birth, and preventing abortion. I have known, ſays Geoffroy, many women, who had never reached the end of pregnancy, made joyful mothers by the uſe of pills compoſed of *kermes, germin. ovor. exſiccat.* and *confectio de hyacintho* (a compoſition, containing ſome vegetable aſtringents and aromatics, together with gold and ſilver leaf, four precious ſtones, and other ingredients of leſs value): three of theſe pills muſt be taken for the firſt doſe, and this repeated three times, at the interval of twice three hours; after which three pills more are to be taken every morning on the three laſt days of the moon in every month till delivery. Notwithſtanding this aſſertion, we conceive our readers will with us believe, that neither the kermes, or its auxiliaries, are to be much depended on. The kermes gives name to an officinal confection, which appears to be greatly ſuperior to the above compoſition.

* KINO. *Gummi rubrum aſtringens* D^ris^ Fothergill *in med. obſ. Kino Ph. Edinb.* Red aſtringent gum from Gambia: ſuppoſed to exude from inciſions made in the trunks of certain trees called *pan de ſangue*, growing in the inland parts of Africa.

It is very friable, ſo as to be crumbled in pieces by the hands; of an opake dark reddiſh colour inclining to black, when reduced to powder, of a deep brick red.

It is ſoluble in aqueous and ſpirituous menſtrua. The Edinburgh college have now received this gum as an officinal, and have directed a tincture, in which two ounces of it are diſſolved in a pound and an half of proof ſpirit.

It is recommended in diſorders from laxity and acrimony, habitual diarrhœas, fluor albus, immoderate menſtrual diſcharges, and ſeminal weakneſſes.

LABDANUM [*L. E.*]

This is a reſinous ſubſtance exuding upon the leaves of the *ciſtus ladanifera Cretica flore purpureo Tourn.* This reſin is ſaid to have been formerly collected from the beards of goats, who brouzed the leaves of the ciſtus: at preſent, a kind of rake, with ſeveral ſtraps or thongs of ſkins fixed to it, is drawn lightly over the ſhrub, ſo as to take up the unctuous juice, which is afterwards ſcraped off with knives. It is rarely met with pure, even in the places which produce it; the duſt, blown upon the plant by the wind, mingling with the tenacious juice. The inhabitants are alſo ſaid to mix with it a certain black ſand. In the ſhops two ſorts are met with: the better (which is very rare) is in dark coloured, almoſt black maſſes, of the conſiſtence of a ſoft plaſter, which grows ſtill ſofter upon being handled; of a very agreeable ſmell, and of a light pungent bitteriſh taſte: the other ſort is harder, not ſo dark coloured, in long rolls coiled up: this is of a much weaker ſmell than the former, and has a large admixture of a fine ſand, which in the labdanum examined by the French academy, made up three-fourths of the maſs. Rectified ſpirit of wine almoſt entirely diſſolves pure labdanum, leaving only a ſmall portion of gummy matter which has no taſte or ſmell: and hence this reſin may be thus excellently purified for internal purpoſes. It is an uſeful ingredient in the ſtomachic and cephalic plaſters of the ſhops.

LAC (*E.*] Milk.

Milk appears to be a vegetable juice, with little or nothing of an animal nature. The quality and uſes of this ſoft nutritious liquor are in general well known: we ſhall therefore, in this place, only give an account of ſome experiments, pointing out the alterations it undergoes from different admixtures, and the difference in quality of the milk of different animals.

New milk mixes uniformly with common water, the mineral chalybeate waters, wines, and malt liquors that are not acid, weak vinous ſpirits, ſolutions of ſugar, ſoaps, and neutral ſalts; but not with oils expreſſed or diſtilled. Acids both mineral and vegetable coagulate it; as alſo do fixt and volatile alkalies, and highly rectified ſpirit of wine: the curd made by acids is in part reſolved again by alkaline liquors, as that made by alkalies is by acids. Neutral ſalts, nitre in particular, preſerve it from coagulating ſpontaneouſly; and likewiſe render it leſs eaſily coagulable by acids.

The human milk is the ſweeteſt of theſe liquors, and that of aſſes next to it. This latter is the moſt dilute of them all; on ſuffering it to coagulate ſpontaneouſly, the curd ſcarce amounted to two drams, from twelve ounces, whilſt that of cows' milk was five times as much: the coagulum of aſſes' milk, even when made by acids, forms only into fine light flakes which ſwim in the ſerum; that of goats' milk concretes into more compact maſſes which ſink.

Upon evaporating twelve ounces of	There remained of dry matter drams,	From which water extracted a ſweet ſaline ſubſtance, amounting, when exſiccated, to drams,
Cows' milk	13	1½
Goats' milk	12½	1½
Human milk	8	6
Aſſes' milk	8	6

The ſaline ſubſtance obtained from aſſes' milk was white, and ſweet as ſugar; that of the others brown or yellow, and conſiderably leſs ſweet; that of cows' milk, the leaſt ſweet of all. It appears, therefore, that aſſes' milk contains more ſerum, and much more of a ſaccharine ſaline matter, than that of cows and goats; and that theſe two abound moſt with unctuous groſs matter: hence theſe are found to be moſt nutritious, whilſt the firſt proves moſt effectual as an aperient and detergent.

The inſpiſſated reſiduum of milk, digeſted with about as much water as was waſted in the evaporation, yields an elegant kind of whey, more agreeable in taſte, and which keeps better than that made in the common manner. This liquor promotes the natural ſecretions in general, and if its uſe be duly continued, does good ſervice in ſcorbutic, and other diſorders, proceeding from thick phlegm and obſtructions of the viſcera.

There are conſiderable differences in the milk of the ſame animal, according to its different aliment. Dioſcorides relates, that the milk of goats, who feed on the ſcammony plant and ſpurges proved cathartic: and examples are given in the Acta Haffnienſia of bitter milk from the animal's having eaten wormwood. It is a common obſervation, that cathartics and ſpirituous liquors given to a nurſe, affect the child: and that the milk of animals feeding on green herbs, is much more dilute than when they are fed with dry ones. Hoffman, from whom moſt of the foregoing obſervations are taken, carries this point ſo far, as to direct the animal to be dieted according to the diſeaſe for which its milk is to be drunk.

LACCA, *gummi-reſina* [E.] Lac, improperly called gum lac.

This is a ſort of wax, of a red colour, collected in the Eaſt-Indies, by certain inſects, and depoſited on ſticks faſtened for that purpoſe in the earth. It is brought over, either adhering to the ſticks, or in ſmall tranſparent grains, or in ſemi-tranſparent flat cakes: the firſt is called ſtick lack, the ſecond ſeed lac, and the third ſhell lac. On breaking a piece of ſtick lac, it appears compoſed of regular cells like the honeycomb, with ſmall corpuſcles of a deep red colour lodged in them. Theſe are the young inſects, and to theſe the lac owes its tincture, for when freed from them its colour is very dilute. The ſhell and ſeed lacs, which do not exhibit any inſects or cellular appearance upon breaking, are ſuppoſed to be artificial preparations of the other: the ſeed ſort is ſaid to be the ſtick lac bruiſed and robbed of its more ſoluble parts; and the ſhell to be the ſeed lac, melted and formed into cakes. The ſtick lac therefore is the genuine ſort, and ought alone to be employed for medicinal purpoſes. This concrete is of great eſteem in Germany, and other countries, for laxity and ſpongineſs of the gums, proceeding from cold, or a ſcorbutic habit. For this uſe the lac is boiled in water, with the addition of a little alum, which promotes its ſolution: or a tincture is made from it with rectified ſpirit. This tincture is recommended alſo internally in the fluor albus, and in rheumatic and ſcorbutic diſorders: it has a grateful ſmell, and a not unpleaſant, bitteriſh, aſtringent taſte: in the Edinburgh Pharmacopœia, a tincture is directed to be made with ſpirit of ſcurvy-graſs. The principal uſe of lac among us is in certain mechanic arts as a colouring drug, and for making ſealing wax.

LAMII ALBI *folia, flores: Lamii albi non fœtentis folio oblongo C. B.* White archangel, or dead nettle; the leaves [*E.*] and flowers [*L. E.*]

This grows wild in hedges; and flowers in April and May. The flowers have been particularly celebrated in uterine fluors, and other female weakneſſes, as alſo in diſorders of the lungs; but they appear to be of very weak virtue.

LAPATHUM, Dock; the roots.

We have ten or eleven docks growing wild in England, the roots of moſt of which are brought to market promiſcuouſly; though two have been generally directed by phyſicians in preference to the others. Theſe are

OXYLAPATHUM: *Lapathum folio acuto plano C. B. Rumex acutus Lin.* The dock with long, narrow, ſharp-pointed leaves, not curled up about the edges [*E.*]

HYDROLAPATHUM, *ſive Herba Britannica: Lapathum aquaticum folio cubitali C. B. Rumex aquaticus Lin.* The great water dock [*E.*]

The leaves of the docks gently looſen the belly, and have ſometimes been made ingredients in decoctions for removing a coſtive habit. The roots are celebrated for the cure of ſcorbutic and cutaneous diſorders, both exhibited internally, and applied externally in ointments, cataplaſms, and fomentations. Muntingius publiſhed a treatiſe on theſe plants in the year 1681, in which he endeavours to prove, that our great water dock is the *herba Britannica* of the ancients: and indeed the deſcription which Dioſcorides gives of the latter, does not ill agree to the former. This author therefore attributes to the *hydrolapathum* all the virtues aſcribed of old to the *Britannica*, particularly recommending it in the ſcurvy and all its ſymptoms. Where this diſorder is of very long ſtanding, ſo as not to yield to the *hydrolapathum* alone, he directs a compoſition, by the uſe of which, he ſays, even the venereal lues will, in a ſhort time, be effectually cured. Six ounces of the roots of the water dock, with two of ſaffron; and of mace, cinnamon, gentian root, liquorice root, and black pepper, each three ounces (or, where the pepper is improper, ſix ounces of liquorice), are to be reduced into coarſe powder, and put into a mixture of two gallons of wine, with half a gallon of ſtrong vinegar, and the yolks of three eggs; and the whole digeſted, with a moderate warmth, for three days, in a glazed veſſel, cloſe ſtopt: from three to ſix ounces of this liquor are to be taken every morning on an empty ſtomach, for fourteen or twenty days, or longer.

LAPATHUM UNCTUOSUM, vide Bonus Henricus.

LAPIS BEZOAR, CALAMINARIS, HÆMATITES, LAZULI; vide Bezoar, Calaminaris, &c.

LAPPA MAJOR, vide Bardana major.

LAVENDULÆ *flores: Lavendulæ anguſtifoliæ C. B.* Common, or narrow-leaved lavender, or ſpike; the flowers [*L.*]

LAVENDULÆ *flores: Lavendulæ latifoliæ C. B. Lavendulæ ſpicæ Lin.* Greater, or broad-leaved lavender; the flowers [*E.*]

Theſe plants have a fragrant ſmell, and a warm, pungent, bitteriſh taſte: the broad-leaved ſort is the ſtronger in both reſpects, and yields in diſtillation thrice as much eſſential oil as the other; its oil is alſo hotter, and ſpecifically heavier. Hence in the ſouthern parts of France, where both kinds grow wild, this only is made uſe of for the diſtillation of what is called oil of ſpike. The narrow-leaved is the ſort commonly met with in our gardens, and therefore alone directed by the London college.

Lavender is a warm ſtimulating aromatic. It is principally recommended in vertigoes, palſies, tremors, ſuppreſſion of the menſtrual evacuations; and in general in all diſorders of the head, nerves, and uterus, proceeding from a weakneſs of the ſolids, and lentor or ſluggiſhneſs of the juices. It is ſometimes alſo uſed externally in fomentations for paralytic limbs. The diſtilled oil is particularly celebrated for deſtroying the *pediculi inguinales*, and other cutaneous inſects. If ſoft ſpongy paper, dipt in this oil, either alone, or mixed with that of almonds, be applied at night to the parts infeſted by inſects, they will certainly, ſays Geoffroy, be all found dead in the morning. The officinal preparations of lavender, are, the eſſential oil, a ſpirit [*L. E.*] and a conſerve [*L.*] the flowers in ſubſtance are an ingredient in the ſternutatory powder [*L.*] and the oil in the cephalic balſam and cephalic plaſter [*E.*]

LAUREOLÆ *folia, baccæ: Laureolæ ſemper virentis flore viridi, quibuſdam laureolæ maris C. B. Daphnes laureolæ Lin.* Spurge-laurel; the leaves and berries.

This is a ſmall ſhrub, growing wild in ſome of our woods. The leaves, berries, and bark, both of the ſtalks and roots, have an extremely acrid, hot taſte, which laſt for a long time, burning and inflaming the mouth and fauces. Taken internally they operate with great violence by ſtool, and ſometimes by vomit; ſo as ſcarce to be exhibited with any tolerable degree of ſafety, unleſs their virulence be previouſly abated by boiling.

LAURI *folia, baccæ: Lauri vulgaris C. B.* The bay tree; its leaves and berries [*L. E.*]

Theſe are generally brought from the Streights, though the tree bears the colds of our own climate. They have a moderately ſtrong aromatic ſmell, and a warm, bitteriſh, pungent taſte: the berries are ſtronger in both reſpects than the leaves, and afford in diſtillation a larger quantity of aromatic eſſential oil; they yield alſo an almoſt inſipid oil to the preſs, in conſequence of which they prove unctuous in the mouth. Theſe ſimples are warm carminative medicines, and ſometimes exhibited in this intention againſt flatulent colics; and likewiſe in hyſterical diſorders.

Their principal uſe in the preſent practice is in glyſters, and ſome external applications. The leaves enter our common fomentation: and the berries, the plaſter and cataplaſm of cummin; they alſo give name to an electary, which is little otherwiſe uſed than in glyſters.

LAZULI *lapis*; [*E.*] a compact ponderous foſſil, of an opake blue colour, met with in the eaſtern countries, and in ſome parts of Germany. It is a ſtrong emetic, rarely or never uſed in the preſent practice.

LENTIS VULGARIS *ſemen*: *Lentis vulgaris ſemine ſubrufo C. B.* Lentile; the ſeed.

This is a ſtrong, flatulent food, very hard of digeſtion: it is never, at leaſt with us, uſed for any medicinal purpoſe.

LENTISCUS: *Lentiſcus verus ex inſula Chio, cortice et foliis fuſcis Commelin. Piſtachia Lentiſcus Lin.* The lentiſc, or maſtich tree; the wood [*E.*]

This tree, or ſhrub, is a native of the warm climates, but bears the common winters of our own. The wood is brought to us in thick knotty pieces, covered with an aſh coloured bark, and white within, of a rough, ſomewhat pungent taſte, and an agreeable, though faint ſmell; the ſmaller tough ſprigs are both in taſte and ſmell the ſtronger. This wood is accounted a mild balſamic reſtringent; a decoction of it is in the German ephemerides dignified with the title of vegetable *aurum potabile*, and ſtrongly recommended in catarrhs, nauſeæ, and weakneſs of the ſtomach; for ſtrengthening the tone of the viſcera in general, and promoting the urinary ſecretion.

This is the tree which in the iſland Chio affords the reſin, called maſtich. See MASTICHE.

LEPIDII *folia*: *Lepidii latifolii C. B.* Common broad ditander, pepperwort, or poor man's pepper; the leaves [*E.*]

This plant is ſometimes found wild by the ſides of rivers, and in other moiſt places. The leaves have an aromatic, pungent, biting taſte, ſomewhat approaching to that of pepper, but going off ſooner than that of moſt other ſubſtances of this claſs. They are very rarely employed in medicine, though ſtrongly recommended as antiſcorbutics,

butics, and for promoting the urinary and cuticular ſecretions; virtues to which they have undoubtedly a good title.

LEUCOIUM LUTEUM, vide Cheiri.

LEVISTICI, *ſeu Liguſtici radix ſemen* [*E.*] *Angelicæ montanæ perennis, paludapii folio Tourn.* Lovage; the root and ſeed [*E.*]

This is a large umbelliferous plant, cultivated with us in gardens. The root nearly agrees in quality with that of angelica: the principal difference is, that the lovage root has a ſtronger ſmell, and a ſomewhat leſs pungent taſte, accompanied with a more durable ſweetneſs: the ſeeds are rather warmer than the root. Theſe ſimples, though certainly capable of being applied to uſeful purpoſes, are not at preſent regarded: neither of them is directed in extemporaneous preſcription, and the root enters no officinal compoſition. The ſeeds are an ingredient in the compound valerian water and troches of myrrh of the Edinburgh pharmacopœia; in both which they excellently coincide with the other ingredients.

LICHEN: *Lichen petræus cauliculo pileolum ſuſtinente C. B.* Liverwort; the herb.

This grows wild in moiſt ſhady places, and by the ſides of rivers. It has a faint not-diſagreeable ſmell; and an herbaceous, roughiſh, and ſomewhat bitteriſh taſte. Great virtues have been attributed to this ſimple in obſtructions of the liver, jaundice, &c. which practitioners do not now expect from it.

LICHEN CINEREUS TERRESTRIS: *Lichen terreſtris cinereus Raii. Lichen caninus Lin.* Aſh-coloured ground liverwort [*L. E.*]

This conſiſts of pretty thick digitated leaves, flat above, of a reticular texture underneath, and faſtened to the earth by ſmall fibres: the leaves when in perfection are of an aſh colour; by age they become darker coloured or reddiſh. It is met with on commons and open heaths, where it quickly ſpreads on the ground. Dr. Mead informs us, that this plant grows in all countries, and has been brought over from America along with the Peruvian bark: that it is found at all times, but ought to be gathered from autumn to winter, as being then in its freſheſt vigour.

This ſimple is ſaid to be a warm diuretic; but the taſte diſcovers in it little or no warmth. It is chiefly celebrated for its virtue in the cure of the diſorders occaſioned by the bite of a mad dog. An account of the remarkable effects in theſe caſes of a powder compoſed of the dried leaves and pepper, was communicated to the Royal Society by Mr. Dampier, and publiſhed in the Phil. Tranſ. No. 237. This powder was afterwards inſerted (in the year 1721) into the London pharmacopœia, under the title of *pulvis antilyſſus*, at the deſire of an eminent phyſician, who had great experience of its good effects. Some years after, the ſame gentleman publiſhed and diſperſed a paper containing the method of cure, which he had in a great number of inſtances conſtantly found ſucceſsful. In this paper, the directions were to the following effect: "Let "the patient be blooded nine or "ten ounces; and afterwards take "a dram and a half of the pow"der every morning faſting, for "four mornings ſucceſſively, in "half a pint of cows milk, warm. "After theſe four doſes are taken, "the patient muſt go into the cold "bath, or a cold ſpring or river, "every morning faſting, for a "month; he muſt be dipt all "over, but not ſtay in (with his "head above water) longer than "half a minute, if the water be "very cold: after this he muſt go "in three times a week for a fort-"night longer." In the year 1745, the world was favoured with a new edition of the mechanical account of poiſons, in which we find the ſame method of cure again recommended, as having, in a courſe of thirty years experience, never failed of ſucceſs; where it had been followed before the hydrophobia begun. It is greatly to be wiſhed, that the efficacy of this medicine in preventing theſe terrible diſorders, was abſolutely certain, and proved by inconteſtible facts. Inſtances have been produced of its proving unſucceſsful; and the many examples of the fatality of the diſeaſe which continually occur, ſeem arguments either of the inefficacy of the medicine, or of a ſtrange negligence in applying it. We ſhall only further obſerve, that Boerhaave, who is in general ſufficiently liberal in the commendation of remedies, ranks this among thoſe inſignificant trifles, upon which whoever ſhall depend will find himſelf deceived.

LIGNUM ALOES, vide AGALLOCHUM.

LIGNUM RHODIUM [*L. E.*] et ASPALATHUS [*E.*] Roſewood, a wood or root, brought from the Canary iſlands: and aſpalathus, a ſimple of conſiderable eſteem among the ancients, but which has not come to our kowledge.

The writers on botany, and the materia medica, are much divided about the lignum rhodium, not only with regard to the plant which affords it, but likewiſe in their accounts of the drug itſelf, and have deſcribed, under this name, ſimples manifeſtly different. This confuſion ſeems to have ariſen from an opinion, that the rhodium and aſpalathus are the ſame; whence different woods brought into Europe for the aſpalathus were ſold again by the name of rhodium.

As to aſpalathus, the ancients themſelves diſagree; Dioſcorides requiring by this appellation the wood of a certain ſhrub freed from the bark, and Galen the bark of a root. At preſent, we have nothing under this name in the ſhops. What was ſold among us as aſpalathus, was a pale-coloured wood brought from the Eaſt Indies, and more commonly called calamback.

The lignum rhodium of the ſhops is uſually in long crooked pieces, full of knots, which, when cut, appear of a yellow colour like box, with a reddiſh caſt: the largeſt, ſmootheſt, moſt compact, and deepeſt coloured pieces, ſhould be choſen; and the ſmall, thin, or pale ones rejected. The taſte of this wood is lightly bitteriſh, and ſomewhat pungent; its ſmell very fragrant, reſembling that of roſes: long kept, it ſeems to loſe its ſmell; but, on cutting, or rubbing one piece againſt the other, it ſmells as well as at firſt. Diſtilled with water, it yields an odoriferous eſſential oil, in very ſmall quantity. Rhodium is at preſent in eſteem only upon account of its oil, which is employed as an high and agreeable perfume in ſcenting pomatums, and the like. But if we may reaſon from analogy, this odoriferous ſimple might be advantageouſly applied to nobler purpoſes: a tincture of it in rectified ſpirit of wine, which contains in a ſmall volume the virtue of a conſiderable deal of the wood, bids fair to prove a cordial, not inferior perhaps to any thing of this kind.

LIGNUM TINCTILE CAMPECHENSE [*L. E.*]: *Lignum Braſilio ſimile, cæruleo tingens J. B. Hæmatoxylum Campechianum Lin.* Campeachy or logwood; a wood brought from Campeachy in the bay of Honduras.

This is uſually in large logs, very compact and hard, of a red colour, and an aſtringent ſweet taſte. It was for a long time uſed only by the dyers. A decoction of it, and the extract, are now in uſe in our hoſpitals, and are ſaid to have proved very ſerviceable in diarrhœas. The extract is now received into the ſhops. See Part III. chap. vi.

LILII ALBI *radix, flores: Lilii albi flore erecto et vulgaris C. B.* White lily; the roots and flowers [*E.*]

This is cultivated in gardens, more for the beauty of its flowers, than medicinal uſe.

LILII CONVALLIUM *radix, flores: Lilii convallium albi C. B. Convallariæ majalis Lin.* Lily of the valley, or May lily; the roots and flowers [*E.*] This grows wild in woods and ſhady places, flowering in May.

The flowers of theſe plants are ſaid to be cephalic and nervine. They have a pleaſant ſweet ſmell, which they impart by infuſion to expreſſed oils, and give over in diſtillation both to water and ſpirit; but no eſſential oil has been hitherto obtained from them. Etmuller ſays, that the diſtilled ſpirit is more fragrant than the water. The roots of the garden lily abound with a ſoft mucilage, and hence they have been uſed externally in emollient and maturating cataplaſms. They are an ingredient in the ſuppurating cataplaſms of the Edinburgh pharmacopœia. Thoſe of the wild lily are very bitter: dried, they are ſaid to prove a gentle errhine; as alſo the flowers.

LIMONUM *ſuccus, cortex: Fructûs mali limoniæ acidæ C. B. Citri Limonis Lin.* Lemons; their juice, yellow rind [*L. E.*] and its eſſential oil, called eſſence of lemons [*L.*]

The juice of lemons is ſimilar in quality to that of oranges, from which it differs little otherwiſe than in being more acid. The yellow peel is an elegant aromatic, and is frequently employed in ſtomachic tinctures and infuſions: it is conſiderably leſs hot than orange peel, and yields in diſtillation with water leſs quantity of eſſential oil. Its flavour is nevertheleſs more periſhable, yet does not ariſe ſo readily with ſpirit of wine; for a ſpirituous extract made from lemon peel poſſeſſes the aromatic taſte and ſmell of the ſubject in much greater perfection than an extract prepared in the ſame manner from the peels of oranges. In the ſhops, a ſyrup is prepared from the juice, and the peel is candied; the peel is an ingredient in the bitter infuſions, bitter wine, and both the peel and juice in one of the infuſions of ſena; the eſſential oil in the volatile aromatic ſpirit, ſaponaceous pills, and ointment of ſulphur [*L.*]

LINGUÆ CERVINÆ, *ſeu Scolopendrii folia: Linguæ cervinæ officinarum C. B. Aſplenii Scolopendrii Lin.* Harts tongue: the leaves [*E.*]

This plant conſiſts of a number of long narrow leaves, without any ſtalk: it grows upon rocks and old walls, and remains green all the year. The leaves have a roughiſh, ſomewhat mucilaginous taſte, like that of the maiden hairs, but more diſagreeable. They are recommended in obſtructions of the viſcera, and for ſtrengthening their tone; and have ſometimes been made uſe of for theſe intentions, either alone, or in conjunction with maiden-hair, or the other plants called capillary.

LINI CATHARTICI *folia: Lini pratenſis floſculis exiguis C. B.* Purging flax, or mill-mountain; the leaves [*E.*]

This is a very ſmall plant, not above four or five inches high, found wild upon chalky hills, and in dry paſture grounds. Its virtue is expreſſed in its title; an infuſion in water or whey of a handful of the freſh leaves, or a dram of them in ſubſtance when dried, are ſaid to purge without inconvenience.

LINI VULGARIS *ſemen: Lini ſativi C. B.* Common flax; the ſeed, called linſeed [*L. E.*]

Linſeed yields to the preſs a conſiderable quantity of oil; and boiled in water, a ſtrong mucilage. Theſe are occaſionally made uſe of for the ſame purpoſes as other ſubſtances of that claſs; and ſometimes the ſeeds themſelves in emollient and maturating cataplaſms. They have alſo been employed in Aſia, and, in times of ſcarcity, in Europe, as food, but are not agreeable, or in general wholeſome. Tragus relates, that thoſe who fed on theſe ſeeds, in Zealand, had the hypochondres much diſtended, and the face and other parts ſwelled, in a ſhort time; and that not a few died of theſe complaints. The expreſſed oil is an officinal preparation [*L. E.*]: the cake, remaining after the oil, is an ingredient in the ſuppurating cataplaſm, and the ſeeds in the nephritic decoction [*E.*]

LITHARGYRUS [*L. E.*] Litharge: a preparation of lead, uſually in form of ſoft flakes, of a yellowiſh reddiſh colour. If calcined lead be urged with a haſty fire, it melts into the appearance of oil, and on cooling concretes into litharge. Greateſt part of the litharge met with in the ſhops, is produced in the purification of ſilver from lead, and the refining of gold and ſilver by means of this metal. According to the degree of fire and other circumſtances, it proves of a pale or deep colour; the former has been commonly called litharge of ſilver, the other of gold. See PLUMBUM.

* LOBELIÆ *radix: Lobeliæ* [*E.*] *Rapunculi galeati virginiani flore violaceo Moriſon. Lobeliæ ſiphiliticæ Lin.* Blue Cardinal-Flower.

An herbaceous perennial plant, with an erect ſtalk, three or four feet high, and ovate-lanceolate ſubſerrated leaves, bearing long ſpikes of labiated, irregular, blue flowers, each with five ſtamina having connate antheræ, ſucceeded by a bilocular capſule, containing many ſmall ſeeds. The whole plant has a milky juice, and ſomething of a rank ſmell. It grows in moiſt places in Virginia, and bears the winters of our climate.

The root of this plant conſiſts of white fibres, a line in thickneſs, and about two inches in length. It reſembles tobacco in taſte, which dwells on the tongue, and is apt to excite vomiting. It was long a famous ſecret among the North American Indians for the cure of the venereal diſeaſe. The ſecret was purchaſed by Sir William Johnſon, and has been made public in the writings of Bartram, Kalm, and others.

A decoction is made of a handful of the roots in three meaſures of water. Half a meaſure is taken in the morning faſting, and repeated in the evening; and the doſe is gradually increaſed till its purgative effects become too violent, when the medicine is for a time to be intermitted, and then renewed, till a perfect cure be effected. One doſe daily is ſufficient during the latter part of the treatment; and the regimen, during the whole proceſs, is to be equally ſtrict with that obſerved in a courſe of mercurial ſalivation. From the third day, the ulcers are to be well waſhed twice daily with the decoction; and it is ſaid that, when they are very deep and foul, the Indians ſprinkle them with powder of the internal bark of the ſpruce-tree. The Edinburgh college have received it into their lateſt catalogue of ſimples.

* LOPEZIANA *Indica Radix Ph. Edinb. e Janne Lopez denominata Gaubii Adverſar.* Cap. VI. The root of an unknown tree brought to us from Batavia. It is met with in pieces of different thickneſs and diameter. The woody part is whitiſh, and very light; ſofter, more ſpongy, and whiter next the bark, including a denſer, ſomewhat reddiſh medullary part.

The bark is rough, wrinkled, brown, ſoft, and as it were woolly, pretty thick, covered with a thin paler cuticle.

It has no remarkable ſmell or taſte. On boiling in water, no odour is emitted; and the ſtrained liquor, which is of a yellow hue, is almoſt inſipid, only impreſſing the tongue with a very light obſcure bitteriſhneſs; and without viſcidity. Rectified ſpirit is tinged by this root of a brown colour, but acquires no particular taſte.

It is regarded in the Eaſt Indies as a medicine of extraordinary efficacy in diarrhœas; and the learned Gaubius in his Adverſaria has publiſhed an account of ſome experiments made with it, which in ſome degree confirm its reputation.

LUJULÆ *folia: Oxyos albæ Gerard. Oxalis Acetoſellæ Lin.* Wood ſorrel; the leaves [*L. E.*]

This is a ſmall plant, growing wild in woods. In taſte and medical qualities, it is ſimilar to the common ſorrel (ſee Acetosa), but conſiderably more grateful, and hence is preferred by the London college. Boiled with milk, it forms an agreeable whey; and beaten with ſugar, a very elegant conſerve, which has been for ſome time in the ſhops, and is now received in the diſpenſatory.

LUMBRICI et LIMACES TERRESTRES. Earthworms and ſnails [*E.*]

Both theſe are ſuppoſed to cool and cleanſe the viſcera. The latter, from their abounding with a viſcid glutinous juice, are recommended as a reſtorative in conſumptions. For this purpoſe, they are directed to be boiled in milk; and thus managed, they may poſſibly be of ſome ſervice. They give over nothing in diſtillation either with water or ſpirit; and hence the diſtilled waters of them, though formerly in great eſteem, are not found to have any of the virtues which the animals themſelves are ſuppoſed to poſſeſs.

LUPINI, *ſemen: Lupini vulgaris, ſemine et flore albo, ſativi J. B.* White lupins; the ſeeds.

Theſe have a leguminous taſte, accompanied with a diſagreeable bitter one. They are ſaid to be anthelmintic, both internally taken, and applied externally.

LUPULUS: *Convolvulus perennis, heteroclitus, floribus herbaceis,*

baceis, capſulis foliaceis ſtrobili inſtar Moriſ. Humulus Lupulus Lin. Hops; the looſe leafy heads on the tops of the ſtalks.

Theſe form one of the moſt agreeable of the ſtrong bitters, though rarely employed for any medicinal purpoſes. Their principal conſumption is in malt liquors, which they render leſs glutinous and diſpoſe to paſs off more freely by urine.

LYCOPERDON: *Fungus rotundus orbicularis C. B. Licoperdon Boviſta Lin.* Puff-ball, or duſty Muſhroom [*E.*]

This fungus is found in dry paſture grounds. It ſeems to be nearly of the ſame quality with the agaric of the oak (ſee p. 76.) and has, like it, been employed for reſtraining external hæmorrhages and other fluxions. The fine duſt, with which it becomes filled by age, has been applied alſo in the ſame intentions.

MACIS [*L. E.*] Mace; one of the coverings of the nutmeg (ſee *Nux moſchata).* This ſpice, conſidered as the ſubject both of medicine and of pharmacy, agrees nearly with the nutmeg. The principal difference is, that mace is ſomewhat leſs aſtringent, yields to the preſs a more fluid oil, and in diſtillation a more volatile one. What is called in the ſhops expreſſed oil of mace, is prepared not from this ſpice, but from the nutmeg. Mace is an ingredient in the officinal ſteel wine [*L.*] and aqua mirabilis [*E.*]; and the expreſſed oil in the ſtomachic and cephalic plaſters [*L.*]

MAGISTRANTIA, vide IMPERATORIA.

MAJORANÆ *folia: Majoranæ vulgaris C. B. Origani Majoranæ Lin.* Sweet marjoram; the leaves [*L. E.*]

Marjoram is raiſed annually in our gardens for culinary as well as medicinal uſes; the ſeeds are commonly procured from the ſouthern parts of France, where the plant grows wild. It is a moderately warm aromatic, yielding its virtues both to aqueous and ſpirituous liquors by infuſion, and to water in diſtillation. It is principally celebrated in diſorders of the head and nerves, and in the humoural aſthmas and catarrhs of old people. An eſſential oil of the herb is kept in the ſhops. The powder of the leaves proves an agreeable errhine, and enters the officinal ſternutatory powder.

MALABATHRUM *folium: Folium cinnamoni ſive canellæ Malavaricæ et Javanenſis C. B. Laurus Caſſia Lin.* Indian leaf [*L.*]

This leaf is of a green colour, firm texture, very ſmooth on one ſide, leſs ſo on the other, on which run three remarkable ribs through its whole length. Lemery and Pomet affirm, that theſe leaves have no perceptible ſmell or taſte; Herman and others, that they have a very great ſhare of both: thoſe met with in our ſhops have little or no ſmell, till well rubbed, when they emit an agreeable ſpicy odour: on chewing, they are found extremely mucilaginous. This drug is of no further uſe in medicine, than as an ingredient in the mithridate and theriaca; and is, when in its greateſt perfection, much inferior to the mace, which our college direct as a ſuccedaneum to it.

MALVÆ *folia, flores: Malvæ ſylveſtris folio ſinuato C. B.* Mallow; the leaves and flowers [*L. E.*]

Theſe have a ſomewhat mucilaginous ſweetiſh taſte. The leaves are ranked the firſt of the four emollient herbs: they were formerly of ſome eſteem, in food, for looſening the belly; at preſent, decoctions of them are ſometimes employed in dyſenteries, heat and ſharpneſs of urine, and in general for obtunding acrimonious humours. Their principal uſe is in emollient glyſters, cataplaſms, and fomentations. The leaves enter the officinal decoction for glyſters, and a conſerve is prepared from the flowers [*L.*]

MALA: *Fructus mali ſativæ Raii.* Apples [*E.*]

All the ſorts of apples have the common quality of cooling and abating thirſt: the more acid kinds looſen the belly; the auſtere have rather a contrary effect.

MALA SYLVESTRIA: *Fructus mali ſylveſtris acido fructu Tourn.* Crab apples, or wildings [*E.*]

Theſe are ſo acid as not to be eatable: their juice, called verjuice, has ſometimes ſupplied the place of vinegar, and has been made an ingredient in cooling and reſtringent gargariſms. At preſent, they are ſcarce ever employed for any medicinal uſe.

MANNA [*L. E.*] *Ex Fraxino Orno Lin.* The juice of certain trees of the aſh kind (growing in Italy and Sicily) either naturally concreted on the plants; or exſiccated and purified by art. There are ſeveral ſorts of manna in the ſhops. The larger pieces, called flake manna, are uſually preferred; though the ſmaller grains are equally as good, provided they be white, or of a pale yellow colour, very light, of a ſweet not unpleaſant taſte, and free from any viſible impurities. Some people injudiciouſly prefer the fat honey-like manna to the foregoing: this has either been expoſed to a moiſt air, or damaged by ſea or other water. This kind of manna is ſaid to be ſometimes counterfeited by a compoſition of ſugar and honey, mixed with a little ſcammony: there is alſo a factitious manna, which is white and dry, ſaid to be compoſed of ſugar, manna, and ſome purgative ingredient, boiled to a proper conſiſtence; this may be diſtinguiſhed by its weight, ſolidity, untranſparent whiteneſs, and by its taſte, which is different from that of manna.

Manna is a mild, agreeable laxative, and may be given with ſafety to children and pregnant women: nevertheleſs, in ſome particular conſtitutions, it acts very unkindly, producing flatulencies and diſtenſion of the viſcera; theſe inconveniencies may be prevented by the addition of any grateful warm aromatic. Manna operates ſo weakly, as not to produce the full effect of a cathartic, unleſs taken in large doſes, and hence it is rarely given in this intention by itſelf. It may be commodiouſly diſſolved in the purging mineral waters, or joined to the cathartic ſalts, ſena, rhubarb, or the like. Geoffroy recommends acuating it with a few grains of emetic tartar; the mixture is to be divided into ſeveral doſes, each containing one grain of the emetic tartar: by this management, he ſays, bilious ſerum will be plentifully evacuated, without any nauſea, gripes, or other inconvenience. It is remarkable, that the efficacy of this drug is greatly promoted (if the account of Valliſnieri deſerve credit) by a ſubſtance which is itſelf very ſlow of operation, caſia. (See CASIA.) Manna is an ingredient in the electary of caſia [*L. E.*]

and gives name to an officinal lohoch [*E.*]

MARGARITÆ [*L. E*] Pearls; ſmall concretions of a tranſparent whiteneſs, found on the inſide of the ſhell of the *concha margaritifera* or mother-of-pearl fiſh, as alſo of certain oyſters, muſſels, and other ſhell fiſhes. The pearls moſt eſteemed are brought from the Eaſt and Weſt-Indies, and diſtinguiſhed by the names of oriental and occidental: the oriental, which are valued moſt, have a more ſhining ſilver hue than the occidental; theſe latter are ſomewhat milky: a ſort inferior to both theſe is ſometimes met with in our own ſeas, particularly on the coaſts of Scotland. The coarſe, rough pearls, and the very ſmall ones which are unfit for other uſes, are thoſe generally employed in medicine. They have been greatly celebrated as cordial, alexipharmac, and comforting the nerves: but the only virtue that can be reaſonably expected from them is, that of abſorbing acidities in the primæ viæ, in which intention they enter three of the officinal powders. Their comparative ſtrength, with regard to the other abſorbents, may be ſeen among the tables at the beginning of this work: ſee p. 63.

MARRUBII *folia: Marrubii albi vulgaris C. B.* White horehound; the leaves [*L. E.*]

Theſe have a very ſtrong, not diſagreeable ſmell, and a roughiſh very bitter taſte. Beſides the virtues which they poſſeſs in common with other ſtrong bitters, they are ſuppoſed to be peculiarly ſerviceable in humoural aſthmas and coughs, the yellow jaundice proceeding from a viſcidity of the bile, and other chronical diſorders. They are doubtleſs an uſeful aperient and deobſtruent, promote the fluid ſecretions in general, and, liberally taken, looſen the belly. They are an ingredient only in the theriaca [*L.*]

MARI SYRIACI *folia: Mari cortuſi J. B. Chamædryos maritimæ incanæ fruteſcentis foliis lanceolatis Tourn. Origani Syriaci Lin.* Syrian herb maſtich; the leaves [*L. E.*]

This is a ſmall ſhrubby plant, growing ſpontaneouſly in Syria, Candy, and other warm climates, and cultivated with us in gardens. The leaves have an aromatic bitteriſh taſte; and, when rubbed betwixt the fingers, a quick pungent ſmell, which ſoon affects the head, and occaſions ſneezing: diſtilled with water, they yield a very acrid, penetrating eſſential oil, reſembling one obtained by the ſame means from ſcurvy-graſs. Theſe qualities point out the uſes to which this plant might be applied; at preſent, it is little otherwiſe employed than in cephalic ſnuffs. It is an ingredient in the *pulvis ſternutatorius* of the London pharmacopœia.

MARI VULGARIS *folia: Sampſuci ſive mari maſtichen redolentis C. B. Thymbræ Hiſpanicæ majoranæ folio Tourn. Thymi maſtichinæ Lin.* Herb maſtich; the leaves [*L. E.*]

This pungent aromatic plant is become almoſt a ſtranger to practice.

MASTICHE [*L. E.*] Maſtich; a reſin exuding from the lentiſc tree (ſee LENTISCUS) and brought from Chio, in ſmall, yellowiſh tranſparent grains or tears, of an agreeable ſmell, eſpecially when heated or ſet on fire. This reſin is recommended in old coughs, dyſenteries, hæmoptoes, weakneſs of the ſtomach, and in general in all debilities and laxity of the fibres. Geoffroy directs an aqueous decoction of it to be uſed for theſe purpoſes: but water extracts little or nothing from this reſin; rectified ſpirit almoſt entirely diſſolves it. The ſolution taſtes very warm and pungent.

MATRICARIÆ *folia, flores: Matricariæ vulgaris ſeu ſativæ C. B. Matricariæ Parthenii Lin.* Common wild featherfew or feverfew; the leaves [*L. E.*] and flowers [*E.*]

This plant is a celebrated antihyſteric. Simon Paulli relates, that he has experienced moſt happy effects from it in obſtructions of the uterine evacuations. I have often ſeen, ſays he, from the uſe of a decoction of matricaria and chamomile flowers with a little mugwort, hyſteric complaints inſtantly relieved, the diſcharge ſucceed plentifully, and the patient from a lethargic ſtate, return as it were into life again. Matricaria is likewiſe recommended in many other diſorders, as a warm ſtimulating bitter: all that bitters and carminatives can do, ſays Geoffroy, may be expected from this. It is undoubtedly a medicine of ſome uſe in theſe caſes, though not perhaps equal to chamomile flowers alone, with which the matricaria agrees in ſenſible qualities, except in being weaker.

MECHOACANNÆ *radix* [*E.*] *Convolvuli Mechoacannæ Lin.* The root of an American convolvulus, brought chiefly from Mechoacan, a province of Mexico, in thin ſlices like jalap, but larger, and of a whitiſh colour. It was firſt introduced among us (about the year 1524) as a purgative univerſally ſafe, and capable of evacuating all morbific humours from the moſt remote parts of the body. As ſoon as jalap became known, Mechoacan gradually loſt its reputation, which it has never ſince been able to retrieve. It is nevertheleſs by ſome ſtill deemed an uſeful cathartic. It has very little ſmell or taſte, and is not apt to offend the ſtomach; its operation is ſlow, but effectual and ſafe. Geoffroy affirms, that there is ſcarce any purgative accompanied with fewer inconveniencies. It ſeems to differ from jalap only in being weaker; the reſins obtained from both have nearly the ſame qualities, but jalap yields five or ſix times as much as Mechoacan. Hence it is found neceſſary to exhibit the latter in ſix times the doſe of the former, to produce the ſame effects.

MEL [*L. E.*] Honey.—Honey is a vegetable juice, obtained from the honey-comb, either by ſeparating the combs, and laying them flat upon a ſieve, through which the honey ſpontaneouſly percolates; or by including the comb in canvas bags, and forcing the honey out by a preſs. The former ſort is the purer; the latter is found to contain a good deal of the matter of which the comb is formed, and many other impurities: there is another ſort ſtill inferior to the two foregoing, obtained by heating the combs before they are put into the preſs. The beſt ſort is thick, of a whitiſh colour, an agreeable ſmell, and a very pleaſant taſte: both the colour and flavour differ according to the plants from which the bees collect it: that of Narbonne in France, where roſemary abounds, is ſaid to have a very manifeſt flavour of that plant, and to be imitable by adding to other honey an infuſion of roſemary flowers. Honey, conſidered as a medicine, is a very uſeful detergent and aperient, powerfully diſſolving viſcid juices, and promoting the expectoration of tough phlegm: in ſome particular conſtitutions it has an inconvenience of griping or proving purgative; this is ſaid to be in ſome meaſure prevented, by previouſly boiling the honey.

MELAMPODIUM, vide HELLEBORUS NIGER.

MELILOTI *folia, flores: Trifolii odorati ſeu meliloti vulgaris J. B. Trifolii Meliloti officinalis Lin.* Melilot; the leaves and flowers [*E.*]

This grows wild in hedges and among corn; and has likewiſe, for medicinal uſes, been cultivated in gardens. The green herb has no remarkable ſmell; when dry, a pretty ſtrong one: the taſte is roughiſh, bitter, and if long chewed, nauſeous. A decoction of this herb has been recommended in inflammations of the abdomen; and a decoction of the flowers in the fluor albus. But modern practice rarely employs it any otherwiſe than in emollient and carminative glyſters, and in fomentations, cataplaſms, and the like; and in theſe not often. It formerly gave name to one of the officinal plaſters, which received from the melilot a green colour, but no virtue.

MELISSÆ *folia: Meliſſæ hortenſis C. B. Meliſſæ officinalis Lin.* Balm; the leaves [*L. E.*]

This plant, when in perfection, has a pleaſant ſmell, ſomewhat of the lemon kind: and a weak roughiſh aromatic taſte. The young ſhoots have the ſtrongeſt flavour: the flowers, the herb itſelf when old, or produced in very moiſt rich ſoils or rainy ſeaſons, are much weaker both in ſmell and taſte. Balm is appropriated, by the writers on the Materia Medica, to the head, ſtomach, and uterus; and in all diſorders of theſe parts is ſuppoſed to do extraordinary ſervice. So high an opinion have ſome of the chemiſts entertained of balm, that they have expected to find in it a medicine which ſhould prolong life beyond the uſual period. The preſent practice however holds it in no great eſteem, and ranks it (where it certainly deſerves to be) among the weaker corroborants. In diſtillation, it yields an elegant eſſential oil, but in exceeding ſmall quantity; the remaining decoction taſtes roughiſh. Strong infuſions of the herb, drunk as tea, and continued for ſome time, have done ſervice in a weak lax ſtate of the viſcera: theſe liquors, lightly acidulated with juice of lemons, turn of a fine reddiſh colour, and prove an uſeful, and to many a very grateful drink, in dry parching fevers. A ſimple water of the plant is directed in the Edinburgh pharmacopœia, as an officinal.

MELONUM *ſemen.* Melons: the ſeeds. Theſe ſtand among the four greater cold ſeeds. They have been ſometimes uſed, with the others of that claſs, as cooling and emollient; but are at preſent little taken notice of.

MENTHA CATARIA, vide NEPETA.

MENTHÆ VULGARIS *folia: Menthæ anguſtifoliæ ſpicatæ C. B.* Garden or ſpearmint; the leaves [*L. E.*]

The leaves of mint have a warm, roughiſh, ſomewhat bitteriſh taſte; and a ſtrong, not unpleaſant, aromatic ſmell. Their virtues are thoſe of a warm ſtomachic and carminative: in loſs of appetite, nauſeæ, continual reachings to vomit, and (as Boerhaave expreſſes it) almoſt all paralytic weakneſſes of the ſtomach, there are few ſimples perhaps of equal efficacy. In colicky pains, the gripes to which children are ſubject, lienteries, and other kinds of immoderate fluxes, this plant frequently does good ſervice. It likewiſe proves beneficial in many hyſteric caſes, and affords an uſeful cordial in languors and other weakneſſes conſequent upon delivery. The beſt preparations for theſe purpoſes are, a ſtrong infuſion made from the dry leaves in water (which is much ſuperior to one from the green herb) or rather a tincture or extract prepared with rectified ſpirit. Theſe poſſeſs the whole virtues of the mint. The eſſential oil and diſtilled water contain only the aromatic part; the expreſſed juice only the aſtringency and bitteriſhneſs, together with the mucilaginous ſubſtance common to all vegetables. The eſſential oil, a ſimple and ſpirituous water, and a conſerve, are kept in the ſhops: the Edinburgh college directs an infuſion of the leaves in the diſtilled water. This herb is an ingredient alſo in the three alexeterial waters; and its eſſential oil in the ſtomach plaſter [*L.*] and pills [*E.*]

MENTASTRI *folia: Mentaſtri ſpicati folio longiore candicante J. B.* Horſe mint; the leaves. This and ſeveral other ſorts of mint are found wild in moiſt meadows, marſhes, and on the brinks of rivers. They are much leſs agreeable in ſmell than ſpearmint, and have more of a hot unpleaſant bitterneſs.

MENTHÆ PIPERITIDIS *folia: Menthæ ſpicis brevioribus & habitioribus, foliis menthæ fuſcæ, ſapore fervido piperis Raii Synopſ. Menthæ piperitæ Lin.* Peppermint; the leaves [*L. E.*]

This ſpecies has been lately introduced into practice, and received for the firſt time in our preſent pharmacopœia; very few of the botanical or medical writers make mention of it. It grows wild in ſome parts of England, in moiſt watery places, but is much leſs common than the other ſorts. The leaves have a more penetrating ſmell than any of the other mints, and a much warmer, pungent, glowing taſte like pepper, ſinking as it were into the tongue. The principal uſe of this herb is in flatulent colics, languors, and ſimilar diſorders: it ſeems to act as ſoon as taken, and extend its effects through the whole ſyſtem, inſtantly communicating a glowing warmth. Water extracts the whole of the pungency of this herb by infuſion, and elevates it in diſtillation. Its officinal preparations are an eſſential oil, and a ſimple and ſpirituous water [*L.*] The Edinburgh college employ it alſo in the *aqua mirabilis* and elixir of vitriol.

MERCURIALIS *maris & feminæ folia: Mercurialis teſticulatæ ſive maris, & ſpicatæ ſive fœminæ Dioſcoridis & Plinii C. B. Mercurialis annuæ Lin.* Male and female French mercury; the leaves [*E.*]

Theſe ſtand among the five emollient herbs; and in this intention are ſometimes made uſe of in glyſters. A ſyrup made from the leaves, given in a doſe of two ounces, is ſaid to prove a mild and uſeful laxative.

There is another ſort of mercurialis growing in woods and hedges, which though recommended by ſome botanic writers, as having the ſame virtues with the foregoing, and as more palatable, has been found poſſeſſed of noxious qualities. (See *Raii Synopſ.* edit. 3. page 138. *Phil. Tranſ. abr. Lowthorp.* ii. 640.) This may be diſtinguiſhed from the foregoing, by its being a perennial plant, larger, having its leaves rough, and the ſtalk not at all branched. The officinal ſort is named by Linnæus *mercurialis caule brachiato, foliis glabris*; the poiſonous *mercurialis caule ſimpliciſſimo, foliis ſcabris*; and is commonly called with us dogs mercury.

MERCURIUS, vide ARGENTUM VIVUM.

MEI ATHAMANTICI *radix: Mei foliis anethi C.B. Æthuſæ Mei Lin.* Spignel; the root [*L. E.*]

Spignel is an umbelliferous plant, found wild in Italy, and the warmer parts of Europe, and ſometimes alſo in England. The roots have a pleaſant aromatic ſmell, and a warm, pungent, bitteriſh taſte: in virtue they are ſimilar to the *leviſticum*, from which this root ſeems to differ only in being weaker, and ſomewhat more agreeable. It is an uſeful aromatic and carminative, though at preſent little regarded.

MEZEREI *radix, cortex, baccæ: Laureolæ folio deciduo, flore purpureo, officinis, laureolæ fœminæ C. B. Daphnes Mezerei Lin.* Mezereon, or ſpurge-olive; the root, bark, and berries.

The bark and berries are ſtrong purgatives, ſimilar to the *laureola*, or ſpurge laurel. The root is ſometimes uſed in diet-drinks,

MILII *ſemen: Milii ſemen luteo C. B. Panici miliacei Lin.* Millet; the ſeed.

Theſe ſeeds are frequently employed in food, but hardly ever as medicines: they are ſufficiently nutritious, and not difficult of digeſtion.

MILIUM SOLIS, vide LITHOSPERMUM.

MILLEFOLII *folia: Millefolii vulgaris albi, et Millefolii purpurei C. B. Achillææ Millefolii Lin.* Milfoil, or yarrow; the leaves [*E.*]

This grows plentifully about the ſides of fields, and on dry commons, flowering during the greateſt part of the ſummer. The leaves have a rough bitteriſh taſte, and a faint aromatic ſmell. Their virtues are thoſe of a very mild aſtringent, and as ſuch they ſtand recommended in hæmorrhages both internal and external, diarrhœas, debility and laxity of the fibres; and in ſpaſmodic hyſterical affections. In theſe caſes, ſome of the Germans have a very high opinion of this herb, particularly Stahl, who eſteemed it a very effectual aſtringent, and in his language, one of the moſt certain tonics and ſedatives. Its virtues are extracted in great perfection by proof ſpirit; water takes up its aſtringency and bitterneſs, but little of its aromatic flavour; tinctures made in rectified ſpirit contain both, though rather weaker than thoſe in proof ſpirit.

The flowers of milfoil are conſiderably ſtronger in aromatic flavour than the leaves; in diſtillation, they yield a ſmall quantity of eſſential oil, of an elegant blue colour.

The roots, taken up in the ſpring, have an agreeable warm, pungent taſte. Dr. Grew reſembles them to *contrayerva*, and imagines they might in ſome meaſure ſupply its place. This, however, is greatly to be doubted, ſince there is ſuch a remarkable difference betwixt the two, that whilſt one retains its taſte for a length of time after it has been brought to us from America, the taſte of the other is in great meaſure loſt by drying.

MILLEPEDÆ [*L. E.*] Woodlice, hoglice, ſlaters.

Theſe inſects are found in cellars, under ſtones, and in cold moiſt places: in the warmer countries they are rarely met with. Millepedes have a faint diſagreeable ſmell, and a ſomewhat pungent, ſweetiſh, nauſeous taſte. They have been highly celebrated in ſuppreſſions of urine, in all kinds of obſtructions of the bowels, in the jaundice, weakneſs of ſight, and a variety of other diſorders. Whether they have any juſt title to theſe virtues, is greatly to be doubted: thus much is certain, that their real effects come far ſhort of the character uſually given of them. Their officinal preparations are, the millepedes dried and powdered [*L. E.*] and an infuſion of the live inſect in wine [*E.*] They are an ingredient alſo in the icteric decoction of the Edinburgh pharmacopœia.

MINIUM [*L. E.*] Red lead; lead calcined to redneſs. See the article PLUMBUM.

MORI *fructus, et cortex radicis: Mori fructu nigro C. B.* The mulberry tree; its fruit [*L. E.*] and the bark of the roots [*E.*]

This tree is commonly cultivated on account of its fruit, which is rather eaten for pleaſure than uſed as a medicine; it has the common qualities of the other ſweet fruits, abating heat, quenching thirſt, and promoting the groſſer ſecretions. An agreeable ſyrup made from the juice, is kept in the ſhops. The bark of the roots has been in conſiderable eſteem as a vermifuge; its taſte is bitter, and ſomewhat aſtringent.

MOSCHUS [*L. E.*] Muſk.

Muſk is a grumous ſubſtance like clotted blood, found in a little bag, ſituated near the umbilical region of a particular kind of animal met with in China, Tartary, and the Eaſt-Indies: the beſt muſk is brought from Tonquin, an inferior ſort from Agria and Bengal, and a ſtill worſe from Ruſſia.

Fine muſk comes to us in round, thin bladders; which are generally about the ſize of a pigeon's egg, covered with ſhort brown hairs, well filled, and without any appearance of having been opened. The muſk itſelf is dry, with a kind of unctuoſity, of a dark reddiſh brown, or ruſty blackiſh colour, in ſmall round grains, with very few hard black clots, and perfectly free from any ſandy or other viſible foreign matter. If chewed, and rubbed with a knife on paper, it looks ſmooth, bright, yellowiſh, and free from grittineſs. Laid on a red-hot iron, it catches flame, and burns almoſt entirely away, leaving only an exceeding ſmall quantity of light greyiſh aſhes. If any earthy ſubſtances have been mixed with the muſk, the quantity of the reſiduum will readily diſcover them.

Muſk has a bitteriſh ſubacrid taſte; a fragrant ſmell, agreeable at a diſtance, but when ſmelt near, ſo ſtrong as to be diſagreeable, unleſs weakened by the admixture of other ſubſtances. If a ſmall quantity be infuſed in ſpirit of wine in the cold for a few days, it imparts a deep, but not red tincture: this, though it diſcovers no great ſmell of the muſk, is nevertheleſs ſtrongly impregnated with its virtues; a ſingle drop of it communicates to a whole quart of wine a rich muſky flavour. The degree of flavour which a tincture drawn from a known quantity of muſk, communicates to vinous liquors, is perhaps one of the beſt criteria for judging of the goodneſs of this commodity. Neumann informs us, that ſpirit of wine diſſolves ten parts out of thirty of muſk, and that water takes up twelve; that water elevates its ſmell in diſtillation, whilſt pure ſpirit brings over nothing.

Muſk is a medicine of great eſteem in the eaſtern countries: among us, it has been for ſome time pretty much out of uſe, even as a perfume, on a ſuppoſition of its occaſioning vapours, &c. in weak females, and perſons of a ſedentary life. It appears, however, from late experience, to be, when properly managed, a remedy of good ſervice even againſt thoſe diſorders which it has been ſuppoſed to produce. Dr. Wall has communicated (in the Philoſophical Tranſactions, N° 474) an account of ſome extraordinary effects of muſk in convulſive and other diſeaſes, which have too often baffled the force of medicine. The doctor obſerves, that the ſmell of perfumes is often of diſſervice, where the ſubſtance taken inwardly, and in conſiderable quantity, produces the happieſt effects: that two perſons, labouring under a ſubſultus tendinum, extreme anxiety, and want of ſleep, from the bite of a mad dog, by taking two doſes of muſk, each of which were ſixteen grains, were perfectly relieved from their complaints. He likewiſe obſerves, that convulſive hiccups, attended with the worſt ſymptoms, were removed by a doſe or two, of ten grains: and that in ſome caſes, where this medicine could not, on account of ſtrong convulſions, be adminiſtered to the patient by the mouth, it proved of ſervice when injected as a glyſter. He likewiſe adds, that under the quantity of ſix grains, he never found much effect from it; but that, taken to ten grains and upwards, it never fails to produce a mild diaphoreſis, without at all heating or giving any uneaſineſs; that, on the contrary, it eaſes pain, raiſes the ſpirits, and after the ſweat breaks out, the patient uſually falls into a refreſhing ſleep; that he never met with any hyſterical perſon, how averſe ſoever to perfumes, but could take it, in the form of a bolus, without inconvenience. To this paper is annexed an account of ſome further extraordinary effects of muſk, obſerved by another gentleman. Repeated experience has ſince confirmed its efficacy in theſe diſorders. I have myſelf frequently given it with remarkable ſucceſs; and ſometimes increaſed the doſe as far as twenty grains every four hours, with two or three ſpoonfuls of the muſk julep between. The julep is the only officinal preparation of it.

MYROBALANI. Myrobalans, dried fruits brought from the Eaſt-Indies; their outward part, freed from the ſtone.

Five kinds of myrobalans were formerly directed as officinals; (1) The yellow, *myrobalani teretes citrini C. B.* (2) The chebule, *myrobalani maximæ oblongæ anguloſæ C. B.* (3) The Indian or black, *myrobalani nigræ octangularis C. B.* (4) The belliric, *myrobalani rotundæ bellirica C. B.* (5) The emblic, *myrobalani emblicæ in ſegmentis nucleum habentes, anguloſæ J. B.*

All the myrobalans have a low degree of purgative virtue. They have alſo an aſtringent quality, diſcoverable by the taſte, from their uſe among the Indians for tanning leather, and from their ſtriking a black colour with chalybeate ſolutions. In conſequence of this, they are ſuppoſed to ſtrengthen the bowels after their operation as a cathartic is over. Nevertheleſs their purgative virtue is ſo inconſiderable, that practitioners have for a long time laid them entirely aſide in that intention; and the college of Edinburgh, as well as that of London, has now rejected them from the catalogue of officinal ſimples.

MYRRHA [*L. E.*] Myrrh.

Myrrh is a concrete gummy-reſinous juice brought from the Eaſt-Indies, in glebes or drops, of various colours and magnitudes. The beſt ſort is of a brown or reddiſh yellow colour, ſomewhat tranſparent; of a lightly pungent, bitter taſte, with an aromatic flavour, though not ſufficient to prevent its proving nauſeous to the palate; and a ſtrong not diſagreeable ſmell. The medical effects of this aromatic bitter are, to warm and ſtrengthen the viſcera, and diſſolve thick, tenacious juices; it frequently occaſions a mild diaphoreſis, and promotes the fluid ſecretions in general.

Hence it proves ſerviceable, in languid caſes, diſeaſes ariſing from a ſimple inactivity, thoſe female diſorders which proceed from a cold, mucous, ſluggiſh indiſpoſition of the humours, ſuppreſſions of the uterine diſcharges, cachectic diſorders, and where the lungs and thorax are oppreſſed by viſcid phlegm. Myrrh is likewiſe ſuppoſed in a peculiar manner to reſiſt putrefaction in all parts of the body; and in this light ſtands recommended in malignant, putrid, and peſtilential fevers, and in the ſmall-pox, in which laſt it is ſaid to accelerate the eruption.

Rectified ſpirit extracts the fine aromatic flavour and bitterneſs of this drug, and does not elevate any thing of either in evaporation. The gummy ſubſtance left by this menſtruum has a diſagreeable taſte, with ſcarce any thing of the peculiar flavour of the myrrh: this part diſſolves in water, except ſome impurities which remain. In diſtillation with water, a conſiderable quantity of a ponderous eſſential oil ariſes, reſembling in flavour the original drug. Myrrh is the baſis of an officinal tincture [*L. E.*] and gives name to a compound tincture [*E.*] elixir, powder [*L.*] and troches [*E.*]. It is an ingredient in the aloetic wine or elixir proprietatis, the gum pills, Rufus's pills [*L. E.*] ſtomachic pills [*E.*] mithridate, theriaca [*L.*] and theriaca Edinenſis [*E.*]

MYRTI *baccæ: Myrti communis Italicæ C. B.* Myrtle; the berries [*E.*]

This is an evergreen ſhrub, growing in Italy, and cultivated in our botanic gardens. The leaves and berries have been ſometimes made uſe of as aſtringents, but are not at preſent regarded.

NAPI *ſemen: Napi dulcis officinarum: Napi ſativæ C. B.* Sweet navew or navew gentle; the ſeeds [*L.*]

This is a ſort of turnep, ſown in ſome of our gardens for culinary uſe. The roots are warmer than the common turnep. The ſeeds have a bitteriſh taſte, accompanied with a faint aromatic flavour: abundance of virtues has been aſcribed to them, as attenuating, detergent, alexipharmac, and others; at preſent, they are of no further uſe in medicine, than as an ingredient in the theriaca.

NAPI SYLVESTRIS *ſemen: Napi ſylveſtris C. B.* Rape; the ſeeds.

This has little other external

difference from the foregoing than being ſmaller: it grows wild upon dry banks and among corn. The ſeeds of this are warmer and more pungent than thoſe of the garden ſort: the only uſe, however, they are applied to, is the preparation of the oil called rape oil, which is obtained by bruiſing and preſſing the ſeeds: large quantities of the plant are cultivated for this purpoſe in the iſle of Ely.

NARDUS CELTICA: *Radix nardi Celticæ Dioſcoridis C. B. Valerianæ Celticæ Tourn.* Celtic nard [*L. E.*] the root, brought from the Alps, &c.

This root conſiſts of a number of fibres, with the lower part of the ſtalks adhering; the latter are covered with thin yellowiſh ſcales, the remains of the withered leaves.

NARDUS INDICA [*L. E.*] *Nardus Indica, quæ ſpica, ſpica nardi, et ſpica Indica officinarum C. B.* Indian nard, or ſpikenard, brought from the Eaſt-Indies.

This is a congeries of ſmall fibres iſſuing from one head, and matted cloſe together, ſo as to form a bunch about the ſize of the finger, with ſome ſmall ſtrings at the oppoſite end of the head. The matted fibres (which are the part choſen for medicinal purpoſes) are ſuppoſed by ſome to be the head or ſpike of the plant, by others the root: they ſeem rather to be the remains of the withered ſtalks, or the ribs of the leaves. Sometimes entire leaves and pieces of ſtalks are found among them. We likewiſe now and then meet with a number of theſe bunches iſſuing from one root.

Both the nards have a warm, pungent, bitteriſh taſte; and a ſtrong, not very agreeable ſmell. They are ſtomachic and carminative; and ſaid to be alexipharmac, diuretic, and emmenagogue. Their only uſe at preſent is as ingredients in the mithridate and theriaca,

NASTURTII AQUATICI *folia: Naſturtii aquatici ſupini C. B. Siſymbrii Naſturtii aquatici Lin.* Water-creſſes: the leaves [*L. E.*]

This plant grows wild in rivulets, and the clearer ſtanding waters; its leaves remain green all the year, but are in greateſt perfection in the ſpring. They have a quick pungent ſmell (when rubbed betwixt the fingers) and an acrid taſte, ſimilar to that of *cochlearia*, but weaker. As to their virtues, they are among the milder aperient antiſcorbutics. Hoffman has a mighty opinion of this plant, and recommends it as of ſingular efficacy for accelerating the circulation, ſtrengthening the viſcera, opening obſtructions of the glands, promoting the fluid ſecretions, and purifying the blood and humours: for theſe purpoſes, the expreſſed juice, which contains the peculiar taſte and pungency of the herb, may be taken in doſes of an ounce or two, and continued for a conſiderable time. The juice is an ingredient in the *ſucci ſcorbutici* of the ſhops.

NASTURTII HORTENSIS *folia, ſemen: Naſturtii vulgaris ſeu hortenſis tenuiter diviſi Moriſon. Lepidii ſativi Lin.* Garden creſſes; the leaves and ſeeds [*E.*]

The leaves of garden creſſes make an uſeful ſalad in ſcorbutic habits. In taſte and medical virtues, they are ſimilar to the foregoing, but much weaker. The ſeeds alſo are conſiderably more pungent than the leaves.

NEPETÆ *folia: Menthæ catariæ vulgaris et majoris C. B. Ne-*

petæ Catariæ Lin. Nep, or catmint; the leaves [*L. E.*]

This plant is commonly cultivated in our gardens, and is ſometimes alſo found growing wild in hedges and on dry banks. It is a moderately aromatic plant, of a ſtrong ſmell, reſembling a mixture of mint and pennyroyal; of the virtues of which it likewiſe participates.

NEPHRITICUM LIGNUM: *Lignum peregrinum, aquam cæruleam reddens C. B. Guilandina Moringa Lin.* Nephritic wood.

This is an American wood, brought to us in large, compact, ponderous pieces, without knots, of a whitiſh or pale yellow colour on the outſide, and dark coloured or reddiſh within: the bark is uſually rejected. This wood imparts to water or rectified ſpirit a deep tincture, appearing, when placed betwixt the eye and the light, of a golden colour, in other ſituations blue. Pieces of another wood are ſometimes mixed with it, which give only a yellow colour to water. The nephritic wood has ſcarce any ſmell, and very little taſte. It ſtands recommended in difficulty of urine, nephritic complaints, and all diſorders of the kidneys and urinary paſſages; and is ſaid to have this peculiar advantage, that it does not, like the warmer diuretics, heat or offend the parts. Practitioners however have not found theſe virtues warranted by experience.

NICOTIANÆ *folia*: *Nicotianæ latifoliæ majoris C. B. Nicotianæ Tabaci Lin.* Tobacco; the leaves [*L. E.*]

This plant was firſt brought into Europe, about the year 1560, from the iſland Tobago in America; and is now cultivated for medicinal uſe, in our gardens. The leaves are about two feet long, of a pale green colour whilſt freſh, and when carefully dried, of a lively yellowiſh. They have a ſtrong, diſagreeable ſmell, like that of the narcotic plants; and a very acrid burning taſte. Taken internally, they prove virulently cathartic and emetic, occaſioning almoſt intolerable cardialgic anxieties. By boiling in water, their virulence is abated, and at length deſtroyed: an extract made by long coction is recommended by Stahl and other German phyſicians, as a ſafe and moſt effectual aperient, expectorant, detergent, &c. but this medicine, which is extremely precarious and uncertain in ſtrength, has never come into eſteem among us. Tobacco is ſometimes uſed externally in unguents, for deſtroying cutaneous inſects, cleanſing old ulcers, &c. Beaten into a maſh with vinegar or brandy, it has ſometimes proved ſerviceable for removing hard tumours of the hypochondres; an account is given in the Edinburgh eſſays of two caſes of this kind cured by it.

There is another ſort of tobacco found wild on dunghills, in ſeveral parts of England. This is called by C. Bauhine *nicotiana minor*, by Gerard *hyoſcyamus luteus. Nicotiana ruſtica Lin.* It ſeems to agree in quality with the hyoſcyamus formerly mentioned, though (as Dale informs us) often ſubſtituted in our markets for the true tobacco: from which it may be diſtinguiſhed by the leaves being much ſmaller, and the flowers not reddiſh as thoſe of the officinal ſort, but of a yellowiſh green colour.

NIGELLÆ *ſemen*: *Nigellæ flore minore ſimplici candido C. B.* Fennelflower; the ſeeds.

This plant is ſown annually in ſome of our gardens; the ſeeds moſt eſteemed are brought from Italy. They have a ſtrong, not unpleaſant ſmell; and a ſubacrid, ſomewhat unctuous diſagreeable taſte. They ſtand recommended as aperient, diuretic, &c. but have long been ſtrangers to practice, and are by ſome ſuſpected to have noxious qualities.

NITRUM [*L. E.*] Nitre, or ſaltpetre; a ſalt, extracted in Perſia and the Eaſt-Indies, from certain earths that lie on the ſides of hills; and artificially produced in ſome parts of Europe, from animal and vegetable matters rotted together (with the addition of lime and aſhes) and expoſed for a length of time to the air, without the acceſs of which, nitre is never generated. The ſalt extracted from the earths, &c. by means of water, is purified by colature and cryſtallization.

Pure nitre diſſolves in about ſix times its weight of water, and concretes again into colourleſs tranſparent cryſtals; their figure is that of an hexagonal priſm, terminated by a pyramid of an equal number of ſides. It readily melts in the fire; and in contact with fuel deflagrates, with a bright flame and conſiderable noiſe; after the detonation is over, a large quantity of alkaline ſalt is found remaining. The taſte of nitre is ſharp, penetrating, and bitteriſh, accompanied with a ſenſation of coldneſs.

Nitre is a medicine of celebrated uſe in many diſorders. Beſides the aperient quality of neutral ſalts in general, it has a manifeſtly cooling one, by which it quenches thirſt, and abates febrile heats and commotions of the blood. It has one great advantage above the refrigerating medicines of the acid kind, that it does not coagulate the animal juices; blood, which is coagulated by all the mineral acids, and milk, &c. by acids of every kind, are by nitre rendered more dilute, and preſerved from coagulation. It nevertheleſs ſomewhat thickens the thin, ſerous, acrimonious humours, and occaſions an uniform mixture of them with ſuch as are more thick and viſcid; by theſe means preventing the ill conſequences which would otherwiſe enſue from the former, though it has not, as Junckner ſuppoſes, any property of really obtunding acrimony. This medicine for the moſt part promotes urine; ſometimes gently looſens the belly; but in cold phlegmatic habits, very rarely has this effect, though given in large doſes: alvine fluxes, proceeding from too great acrimony of the bile or inflammation of the inteſtines, are ſuppreſſed by it: in choleric and febrile diſorders, it generally excites ſweat; but in malignant caſes, where the pulſe is low, and the ſtrength loſt, it retards this ſalutary evacuation and the eruption of the exanthemata.

Dr. Stahl has written an expreſs treatiſe upon the medical virtues of nitre; in which he informs us, from his own experience, that this ſalt added to gargariſms employed in inflammations of the fauces in acute fevers, thickens the ſalival moiſture upon the palate and fauces into the conſiſtence of a mucus, which keeps them moiſt for a conſiderable time; whereas, if nitre be not added, a ſudden dryneſs of the mouth immediately enſues; that in nephritic complaints, the prudent uſe of nitre is of more ſervice than any of the numerous medicines uſually recommended in that diſeaſe: that nitre gives great relief in ſuppreſſion and heat of urine, whether ſimple or occaſioned by a venereal taint; that it is of great ſervice in acute and inflammatory pains of the head, eyes, ears, teeth, &c. in all eryſipelatous affections, whether particular or univerſal, and likewiſe in chronic deliria; that in diarrhœæ happening in petechial fevers, nitre mixed with abſorbents and diaphoretics, had the beſt effects, always putting a ſtop to the flux, or rendering the evacuation ſalutary; that in diarrhœæ happening in the ſmall-pox, it had been employed with the like ſucceſs, two doſes, or three at moſt (conſiſting of two, three, or four grains each, according to the age, &c. of the patient) given at the interval of two or three hours, putting a ſtop to the flux, after the bezoardic powders, both with and without opium, had been given without ſucceſs. The ſame author recommends this ſalt likewiſe as a medicine of ſingular ſervice in choleras attended with great anxieties and heat of the blood; in the flatulent ſpaſmodic heartburns familiar to hypochondriacal people; and the loſs of appetite, nauſea, vomiting, &c. which gouty perſons are ſometimes ſeized with when the pains of the feet, &c. ſuddenly remit. In caſes of this laſt kind, the uſe of nitre ſurely requires great caution, although the author aſſures us, that no bad conſequences are to be feared from it. Nevertheleſs he obſerves, that in a phthiſis and ulcerous affections, it has been found to be of no ſervice; and that therefore its uſe may be ſuperſeded in theſe complaints. Indeed in diſorders of the lungs in general, it is commonly reckoned to be rather hurtful than beneficial.

The uſual doſe of this medicine among us, is from two or three grains to a ſcruple; though it may be given with great ſafety, and generally to better advantage, in larger quantities: the only inconvenience is its being apt to ſit uneaſy on the ſtomach. Some have affirmed, that this ſalt loſes half its weight of aqueous moiſture by fuſion, and conſequently that one part of melted nitre is equivalent to two of the cryſtals; but it did not appear, upon ſeveral careful trials, to loſe ſo much as one twentieth of its weight. The officinal preparations of nitre are a decoction or ſolution in water [*E.*] and troches [*L.*] A corroſive acid ſpirit is alſo extracted from it; ſee Part II. chap. viii. ſect. 3. It is employed likewiſe in operations on metallic bodies, for promoting their calcination, or burning out their inflammable matter.

NUX MOSCHATA [*L. E.*] *Nux moſchata fructu rotundo C. B. Myriſtica officinalis Lin.* Nutmegs; the kernel of a roundiſh nut which grows in the Eaſt-Indies. The outſide covering of this fruit is ſoft and fleſhy, like that of a walnut, and ſpontaneouſly opens when the nut grows ripe; immediately under this lies the mace (ſee Macis) which forms a kind of reticular covering; through the fiſſures whereof appears a hard woody ſhell that includes the nutmeg. Theſe kernels have long been made uſe of both for medicinal and culinary purpoſes, and deſervedly looked upon as a warm agreeable aromatic. They are ſuppoſed likewiſe to have an aſtringent virtue; and are employed in that intention in diarrhœæ and dyſenteries. Their aſtringency is ſaid to be increaſed by torrefaction, but this does not appear to the taſte: this treatment certainly deprives the ſpice of ſome of its finer oil, and therefore renders it leſs efficacious to any good purpoſe; and if we may reaſon from analogy, probably abates its aſtringency. Nutmegs diſtilled with water, afford a large quantity of eſſential oil, reſembling in flavour the ſpice itſelf; after the diſtillation, an inſipid ſebaceous matter is found ſwimming on the water; the decoction, inſpiſſated, gives an extract of an unctuous, very lightly bitteriſh taſte, and with little or no aſtringency. Rectified ſpirit extracts the whole virtue of nutmegs by infuſion, and elevates very little of it in diſtillation: hence the ſpirituous extract poſſeſſes the flavour of the ſpice in an eminent degree.

Nutmegs yield to the preſs (heated) a conſiderable quantity of limpid yellow oil, which in cooling concretes into a ſebaceous conſiſtence. In the ſhops we meet with three ſorts of unctuous ſubſtances, called oil of mace, though really expreſſed from the nutmeg. The beſt is brought from the Eaſt-Indies, in ſtone jars; this is of a thick conſiſtence, of the colour of mace, and an agreeable fragrant ſmell; the ſecond ſort, which is paler coloured and much inferior in quality, comes from Holland in ſolid maſſes, generally flat and of a ſquare figure: the third, which is the worſt of all, and uſually called common oil of mace, is an artificial compoſition of ſevum, palm oil, and the like, flavoured with a little genuine oil of the nutmeg. Theſe oils yield all that part in which their aromatic flavour reſides, in diſtillation to water, and to pure ſpirit by infuſion: the diſtilled liquor and ſpirituous tincture nearly reſemble in quality thoſe prepared immediately from the nutmeg. The officinal preparations of nutmegs are, a ſpirituous water, eſſential oil, and the nutmegs in ſubſtance roaſted [*L.*] The nutmeg itſelf is uſed in the compound horſeradiſh water, compound ſpirit of lavendar, cordial confection, cardialgic troches, and ſyrup of buckthorn [*L.*]; its eſſential oil, in the volatile aromatic ſpirit [*L.*] and the expreſſed oil in mithridate and theriaca, ſtomachic and cephalic plaſters [*L.*] and cephalic balſam [*E.*]

NUX PISTACHIA: *Nucleus e fructu Piſtaciæ Raii. Piſtachia vera Lin.* Piſtachio [*E.*]

This is a moderately large nut, containing a kernel of a pale greeniſh colour, covered with a reddiſh ſkin. The tree which produces it, grows ſpontaneouſly in Perſia, Arabia, and ſeveral iſlands of the Archipelago: it bears likewiſe the colds of our own climate, ſo as to have produced fruit not inferior to that which we receive from abroad. Piſtachio nuts have a pleaſant, ſweet, unctuous taſte, reſembling that of almonds. They are ranked amongſt the analeptics, and are by ſome much eſteemed in certain weakneſſes, and in emaciated habits.

NYMPHÆÆ ALBÆ *radix, flores: Nymphæ albæ majoris B. C.* White water lily; the root and flowers [*E.*]

This grows in rivers and large lakes, flowering uſually in June. The roots and flowers have a rough, bitteriſh, glutinous taſte (the flowers are the leaſt rough); and when freſh, a diſagreeable ſmell, which is in great meaſure loſt by drying: they are recommended in alvine fluxes, gleets, and the like. The roots are ſuppoſed by ſome to be in an eminent degree narcotic, but on no very good foundation. Lindeſtolpe informs

forms us, that in ſome parts of Sweden, they were in times of ſcarcity uſed as food, and did not prove unwholſome.

OCHRA. Yellow ochre: a ſoft friable ore of iron, of a yellow colour, dug in ſeveral parts of England. It poſſeſſes the virtues of the calces of iron and hæmatites; but in ſo low a degree, that the ſhops have deſervedly rejected it; its principal uſe is as a pigment.

* ŒNANTHE: this is the botanical name of a genus of plants of the umbelliferous claſs, of which there are three ſpecies, natives of Great Britain. One of theſe only is known by its effects on the human body, the *Oenanthe Crocata Lin.* Hemlock dropwort. This is a large umbelliferous plant, growing in ditches and other moiſt places; with pinnated leaves, reſembling thoſe of celery or chervil, and ribbed ſtalks. Its roots afford the eaſieſt mark of diſtinction, which are white, thick, and ſhort, and grow ſeveral together, forming a kind of bunch.

The hemlock dropwort has long been known as a moſt dangerous poiſon; the moſt virulent, perhaps, that this country produces. Its roots or leaves eaten by miſtake, have frequently proved fatal, occaſioning violent ſickneſs and vomiting, rigours, convulſions, delirium, and other terrible affections of the nervous ſyſtem. Dr. Pulteney has publiſhed a caſe in the Philoſ. Tranſact. vol. LXII. in which this plant, uſed by miſtake inſtead of the water parſnep, proved remarkably efficacious in removing an inveterate ſcorbutic complaint, which had reſiſted a variety of other remedies. The doſe firſt given was a common ſpoonful of the juice of the root, which at the firſt exhibition produced very alarming effects. This was afterwards reduced to three tea-ſpoonfuls; which quantity was perſiſted in a conſiderable time, and then changed for a tea of the leaves. The medicine never proved purgative, but was diuretic. It always occaſioned a degree of vertigo; accompanied, when the juice itſelf was taken, with nauſea and ſickneſs.

If this experiment be imitated, it is obvious, the greateſt degree of caution will be neceſſary.

OLIVÆ *earumque oleum: Fructus oleæ ſativæ C. B.* The olive tree; the fruit [*E.*] and its oil [*L. E.*]

This tree grows in the ſouthern parts of France, in Spain, Italy, and other warm countries: with us it is uſually preſerved in the green-houſes of the curious, though it will bear our ordinary winters in the open air, and produce very good fruit. Olives have an acrid, bitter, extremely diſagreeable taſte: pickled (as we receive them from abroad) they prove leſs diſagreeable; the Lucca olives, which are ſmaller than the others, have the weakeſt taſte; the Spaniſh, or larger, the ſtrongeſt; the Provence, which are of a middling ſize, are generally the moſt eſteemed.

The oil obtained from this fruit has no particular taſte or ſmell, and does not greatly differ in quality from oil of almonds. Authors make mention of two ſorts of this oil; one, expreſſed from the olives when fully ripe, which is our common oil olive; the other, before it has grown ripe; this is called *oleum immaturum,* and *omphacinum.* Nothing is met with in the ſhops under this name;

and Lemery affirms, that there is no ſuch oil; unripe olives yielding only a viſcid juice to the preſs. From the ripe fruit, two or three ſorts are obtained, differing in degree of purity: the pureſt runs by light preſſure: the remaining magma, heated and preſſed more ſtrongly, yields an inferior ſort, with ſome dregs at the bottom, called *amurca*. All theſe oils contain a conſiderable portion of aqueous moiſture, and a mucilaginous ſubſtance; which ſubject them to run into a putrid ſtate; to prevent this, the preparers add ſome ſea ſalt, which imbibing the aqueous and mucilaginous parts, ſinks with them to the bottom; by theſe means, the oil becomes more homogene, and conſequently leſs ſuſceptible of alteration. In its paſſage to us, ſome of the ſalt, thrown up from the bottom by the ſhaking of the veſſel, is ſometimes mixed with and detained in the oil, which, in our colder climate, becomes too thick to ſuffer it freely to ſubſide; and hence the oil is ſometimes met with of a manifeſtly ſaline taſte. Oil olive is uſed in the ſimple balſam of ſulphur, Locatelli's balſam, and ſeveral ointments. It is oftener employed in this laſt intention than the other expreſſed oils, but more rarely for internal medicinal purpoſes.

OLIBANUM [*L.E.*] *Ex Juniperolycia Lin.* A gummy-reſin, brought from Turkey and the Eaſt-Indies, uſually in drops or tears, like thoſe of maſtich, but larger, of a pale yellowiſh, and ſometimes reddiſh colour; a moderately warm pungent taſte, and a ſtrong, not very agreeable ſmell. This drug has received many different appellations, according to its different appearances: the ſingle tears are called ſimply *olibanum*, or *thus*: when two are joined together, they have been called *thus maſculum*, and when two were very large, *thus fœmininum*. Sometimes four or five, about the bigneſs of filberds, are found adhering to a piece of the bark of the tree from which they exuded; theſe have been named *thus corticoſum*; the finer powder which rubs off from the tears in the carriage, *mica thuris*; and the coarſer powder, *manna thuris*. This drug is not however in any of its ſtates what is now called *thus* or frankincenſe in the ſhops (ſee THUS).

Olibanum conſiſts of about equal parts of a gummy and reſinous ſubſtance, the firſt ſoluble in water, the other in rectified ſpirit. With regard to its virtues, many have been attributed to it, particularly in diſorders of the head and breaſt, in hæmoptoes, and in alvine and uterine fluxes: but its real effects in theſe caſes are far from anſwering the promiſes of the recommenders. Riverius is ſaid to have had large experience of the good effects of this drug in pleuriſies, eſpecially epidemic ones: he directs a ſcooped apple to be filled with a dram of olibanum, then covered and roaſted under the aſhes; this is to be taken for a doſe, three ounces of carduus water drank after it, and the patient covered up warm in bed: in a ſhort time, he ſays, either a plentiful ſweat, or a gentle diarrhœa will enſue, which carry off the diſeaſe. Geoffroy informs us, that he has frequently made uſe of this medicine, after venæſection, with good ſucceſs; but acknowledges that it has ſometimes failed. Olibanum is an ingredient in the *pulvis e ſuccino*, *theriaca* [*L.*] *confectio japonica*, *pilulæ ex olibano*, and *emplaſtrum defenſivum* [*E.*]

ONONIDIS, *Anonidis, ſive Areſtæ bovis radix: Anonidis ſpinoſæ flore purpureo C. B.* Reſt-harrow, cammock, or petty-whin; the root [*E.*]

This plant grows wild in waſte grounds, and dry fields. The root has a diſagreeable ſmell, and a nauſeous ſweetiſh taſte: it ſtands recommended as an aperient and diuretic; but has never been much regarded among us.

OPHIOGLOSSI *folium: Ophioglosſi vulgati C. B.* Adders tongue; the leaf.

This plant has only one leaf, with a ſlender ſtalk ariſing from the bottom of it, dented about the edges, and ſuppoſed to reſemble the tongue of a ſerpent: it grows wild in moiſt meadows. Scarce any other virtues are attributed to it than thoſe of a vulnerary.

OPIUM [*L. E.*] Opium; the concrete milky juice of the poppy (ſee PAPAVER.)

This juice has not yet been collected in quantity in Europe. Egypt, Perſia, and ſome other provinces of Aſia, have hitherto ſupplied us with this commodity: in thoſe countries, large quantities of poppies are cultivated for this uſe. The opium prepared about Thebes in Egypt, hence named Thebaic opium, has been uſually eſteemed the beſt; but this is not now diſtinguiſhed from that collected in other places. This juice is brought to us in cakes or loaves, covered with leaves, and other vegetable matters, to prevent their ſticking together: it is of a ſolid conſiſtence, yet ſomewhat ſoftiſh and tenacious, of a dark reddiſh brown colour in the maſs, and when reduced into powder, yellow; of a faint diſagreeable ſmell, and a bitteriſh taſte, accompanied with a pungent heat and acrimony.

The general effects of this medicine are, to relax the ſolids, and render them leſs ſenſible of irritation, to cheer the ſpirits, eaſe pain, procure ſleep, promote perſpiration and ſweat, but reſtrain all other evacuations. When its operation is over, the pain, and other ſymptoms which it had for a time abated, return; and generally with greater violence than before, unleſs the cauſe has been removed by the diaphoreſis, or relaxation which it occaſioned.

The operation of opium is generally attended with a ſlow, but ſtrong and full pulſe, a dryneſs of the mouth, a redneſs and light itching of the ſkin: and followed by a degree of nauſea, a difficulty of reſpiration, lowneſs of the ſpirits, and a weak languid pulſe.

The principal indications of opium are, great watchfulneſs, immoderate evacuations proceeding from acrimony and irritation, cramps or ſpaſmodic contractions of the nerves, and violent pains of almoſt every kind. In theſe caſes, opiates procure at leaſt a temporary relief, and an opportunity for other medicines, properly interpoſed, to take effect.

Opium ſometimes defeats the intention of the phyſician, and inſtead of producing reſt, occaſions great anxiety, vomiting, &c. Taken on a full ſtomach, it often proves emetic; where the patient is exhauſted by exceſſive evacuations, it occaſions generally great lowneſs. It has been obſerved to operate more powerfully in perſons of a lax habit, than in the oppoſite circumſtances; whilſt it uſefully reſtrains preternatural diſcharges proceeding from irritation, it proves injurious in thoſe that ariſe from a contrary cauſe, as in the colliquative diarrhœæ attending hectic fevers. By relaxing, taking off ſtrictures, and occaſioning a paralyſis of particular parts, it often promotes ſuch evacuation as thoſe parts are concerned in. Boerhaave obſerves, that it ſometimes enables the ureters to allow an eaſy paſſage even to the calculus: but this effect is by no means conſtant.

With regard to the doſe of opium, one grain is generally a ſufficient, and often too large a one; maniacal perſons, and thoſe who have been long accuſtomed to take it, require three or more grains to have the due effect. Among the eaſtern nations, who are habituated to opium, a dram is but a moderate doſe: Garcias relates, that he knew one who every day took ten drams. Thoſe who have been long accuſtomed to its uſe, upon leaving it off, are ſeized with great lowneſs, languor, and anxiety; which are relieved by having again recourſe to opium, and, in ſome meaſure, by wine or ſpirituous liquors.

Opium is partially ſoluble in water, and rectified ſpirit: proof ſpirit, wine, and vinegar, totally diſſolve it; the impurities only being left. The ſolutions in proof ſpirit and wine, have the ſame effects with the juice in ſubſtance; with this difference, that they exert themſelves ſooner in the body, and are leſs apt to leave a nauſea on the ſtomach. A tincture made in rectified ſpirit is ſuppoſed to operate, in an equal doſe, more powerfully than the foregoing liquors: Geoffroy informs us, from his own experience, that whilſt the watery and vinous ſolutions occaſioned pleaſant quiet ſleep, a tincture drawn with pure ſpirit brought on a phrenſy for a time. Alkaline ſalts diminiſh the ſoporific virtue of this medicine: fixt alkalies render it diuretic, whilſt volatile ones determine its action chiefly to the cutaneous pores. Acids almoſt entirely deſtroy its power. Many have endeavoured to correct ſome imaginary ill qualities of this drug, by toaſting it, by fermentation, by long continued digeſtions, by repeated diſſolutions and diſtillations. Theſe proceſſes, though recommended by many writers, do not promiſe any ſingular advantage: they may indeed weaken the opium; but by theſe very means become prejudicial, rendering the medicine more uncertain in its operation, and the doſe more undetermined.

Opium applied externally, gives eaſe in many pains, but does not, as ſome have ſuppoſed, ſtupify the part, or render it inſenſible of pain: uſed immoderately, it is ſaid to produce the ſame ill effects, as when taken to exceſs internally.

The officinal preparations of opium are, the Thebaic extract, or ſtained opium, and a vinous [*L.*] and ſpirituous [*E.*] tincture. It is a capital ingredient in many compoſitions, as the paregoric elixir [*L. E.*] ſudorific tincture [*E.*] ſaponaceous and ſtorax pills [*L.*] olibanum and pacific pills [*E.*] the compound powder of bole, ſcordium and amber, electary of ſcordium, confectio Paulina, philonium, mithridate, theriaca [*L.*] theriaca Edinenſis, confectio japonica, and anodyne balſam [*E.*]

OPOBALSAMUM [*L. E.*] *Balſamum Judaicum, Syriacum, e Mecha. Ex Balſamo Syriaco rutæ folio Lin.* Opobalſam, or balm of Gilead; a reſinous juice, obtained from an evergreen tree, or ſhrub, growing ſpontaneouſly in Arabia The beſt ſort, which naturally exudes from the plant, is ſcarce known in Europe;

rope; and the inferior kinds, ſaid to be extracted by lightly boiling the leaves and branches in water, are very rarely ſeen among us. The true opobalſam, according to Alpinus, is at firſt turbid and white, of a very ſtrong pungent ſmell, like that of Turpentine, but much ſweeter, and of a bitter, acrid, aſtringent taſte: upon being kept for ſome time, it becomes thin, limpid, light, of a greeniſh hue; then of a gold yellow; and at length of the colour of honey: after this it grows thick like turpentine, and loſes much of its fragrance. This balſam is of great eſteem in the eaſtern countries, both as a medicine, and as an odoriferous unguent, and coſmetic. Its great ſcarcity has prevented its coming into uſe among us. In the mithridate and theriaca, in which it is directed as an ingredient, the London college allows the expreſſed oil of nutmegs as a ſuccedaneum to it.

OPOPANAX [*L. E.*] Opopanax; a concrete gummy reſinous juice, obtained from the roots of an umbelliferous plant, *panax paſtinacæ folio C. B.* which grows ſpontaneouſly in the warmer countries, and bears the colds of this. The juice is brought from Turkey and the Eaſt-Indies, ſometimes in round drops or tears, but more commonly in irregular lumps, of a reddiſh yellow colour on the outſide, with ſpecks of white, inwardly of a paler colour, and frequently variegated with large white pieces. It has a peculiar ſtrong ſmell, and a bitter, acrid, ſomewhat nauſeous taſte. Its virtues are thoſe of an attenuating and aperient medicine. Boerhaave frequently employed it, along with ammoniacum and galbanum, in hypocondriacal diſorders, obſtructions of the abdominal viſcera, and ſuppreſſions of the menſtrual evacuations from the ſluggiſhneſs of mucous humours, and a want of due elaſticity of the ſolids: in theſe intentions it is an uſeful ingredient in the *pilulæ gummoſæ* and compound powder of myrrh of the London pharmacopœia, but is not employed in any compoſition of the Edinburgh. It may be given by itſelf in the doſe of a ſcruple, or half a dram: a whole dram proves, in many conſtitutions, gently purgative.

ORCHIS, vide SATYRION.

ORIGANI *folia: Origani ſylveſtris, cunilæ bubulæ Plini C. B. Origani vulg. Lin.* Wild marjoram; the leaves [*L. E.*]

This is met with upon dry chalky hills; and in gravelly ſoils, in ſeveral parts of England. It has an agreeable ſmell, and a pungent taſte, warmer than that of the garden marjoram, and much reſembling thyme, with which it ſeems to agree in virtue. An eſſential oil diſtilled from it, is kept in the ſhops.

There is another ſort of *origanum* called *Creticum,* whoſe flowers, or rather flowery tops, are ſometimes brought to us from Candy. Theſe have an agreeable aromatic flavour, ſomewhat ſtronger than the common ſort.

ORYZÆ *ſemen* [*E.*] Rice; the ſeeds freed from the outward ſkin; theſe are brought chiefly from Carolina, where the plant is cultivated in large quantities. They are ſufficiently nutritious, and afford an uſeful food in diarrhœæ, dyſenteries, and other diſorders from a thin acrimonious ſtate of the juices,

OSTEOCOLLA [*E.*]

This is a foſſil ſubſtance, found in many parts of Germany, as alſo in England, and other countries. It is generally met with in looſe ſandy grounds, ſpreading, from near the ſurface to a conſiderable depth, into a number of branches, like the roots of a tree: it has a whitiſh colour, rough on the ſurface, and for the moſt part either hollow within, or filled with ſolid wood, or a powdery woody matter. Sometimes the roots of living trees are found changed into this kind of ſubſtance (See *Neumann*'s chemical works, pag. 11, and the *Berlin Memoirs* for the year 1748).

Powdered oſteocolla ſeparates, on ablution with water, into two diſtinct ſubſtances; the finer matter waſhed over, burns into quicklime, and agrees on all trials with powdered limeſtone: the groſſer part which remains is mere ſand; the ſand and calcareous earth are for the moſt part nearly in an equal proportion. From this analyſis we may eaſily judge of the virtue for which this foſſil is celebrated, that of bringing on a callus in fractured bones.

OXALIS, vide ACETOSA.

OXYACANTHA GALENI, vide BERBERIS.

OXYACANTHA VULGARIS, vide SPINA ALEA.

OXYLAPATHUM, vide LAPATHUM.

PÆONIÆ *radix, flores, ſemen: Pæoniæ folio nigricante ſplendido, quæ mas C. B. vel Pæoniæ fœminæ flore pleno rubro majore C. B. Pæoniæ officinalis Lin.* Male and female peony; the roots, flowers, and ſeeds [*L. E.*]

Theſe plants are cultivated in our gardens on account of the beauty of their flowers; the female, which is the larger and more elegant, and for this reaſon the more common, is the only one with which the ſhops are ſupplied. In quality they are ſcarce ſenſibly different; and hence the college allows them to be taken promiſcuouſly. The roots and ſeeds of peony have, when recent, an unpleaſant ſcent, approaching to that of the narcotic plants; and a ſomewhat glutinous ſubacrid taſte, with a light degree of bitterneſs and aſtringency: the leaves alſo diſcover an aſtringent quality both to the taſte, and by changing chalybeate ſolutions of a purple colour: the flowers have little taſte, and a very faint, not agreeable ſmell. The parts which have chiefly been uſed for medicinal purpoſes, are the roots and ſeeds. Theſe are looked upon as emollient, corroborant, and lightly anodyne: and ſuppoſed to be of ſervice in ſome kinds of obſtructions, eroſions of the viſcera, heat of urine, pains in the kidneys, and the like. The virtue for which they are chiefly celebrated, is that of curing ſpaſmodic and epileptic complaints; which many have been abſurd enough to believe that the root of this plant would do, by being only worn about the neck. The root is an ingredient in the *pulvis ad epilepticos* of the Edinburgh pharmacopœia.

PALMÆ *oleum: Palmæ foliorum pediculis ſpinoſis, fructu pruniformi, luteo, oleoſo Sloan. Phœnicis dactyliferæ Lin.* Palm-oil [*E.*]

This oil is obtained from the kernels of the fruit of a ſpecies of palm tree, which is a native of the coaſt of Guinea and Cape Verd iſlands. From theſe places it has been tranſplanted into Jamaica and Barbadoes. The oil as brought to us, is about the conſiſtence of an ointment, and of an orange colour;

a ſtrong, not diſagreeable ſmell, but very little taſte. By long keeping, it loſes its high colour, and becomes white, when it ought to be rejected, as no longer fit for uſe. The inhabitants of the Guinea coaſt are ſaid to make this oil part of their food, and to employ it for the ſame purpoſes as we do butter. With us, it is rarely given inwardly, and uſed only in ſome external applications, for pains and weakneſs of the nerves, cramps, ſprains, and the like. The common people apply it to the cure of chilblains, and when early made uſe of, not without ſucceſs. It is an ingredient in the emollient ointment and ſtomach plaſter of the Edinburgh pharmacopœia.

PAPAVERIS ALBI *capita: Papaveris hortenſis ſemine albo C. B. Papaveris ſomniferi Lin.* The large garden poppy, with white flowers and ſeeds; or the white poppy; its heads [*L.*]

PAPAVER NIGRUM: *Papaver hortenſe nigro ſemine C. B.* The ſmaller garden poppy, with purple flowers and black ſeeds; or the black poppy. The college of Edinburgh ſeems to allow this ſpecies to be uſed promiſcuouſly with the foregoing; having dropt the diſtinction of white and black, and retained in the catalogue only the title of *papaver hortenſe*; of which they direct the heads, ſeeds, and leaves, for medicinal uſe.

The heads and ſtalks of theſe plants contain a milky juice; which may be collected in conſiderable quantity, by lightly wounding them when almoſt ripe. This juice, expoſed for a few days to the air, thickens into a ſtiff tenacious maſs, agreeing in quality with the opium brought from abroad. (See Opium). The juices of both the poppies appear to be ſimilar to one another; the only difference is in the quantity afforded, which is generally in proportion to the ſize of the plants. The larger, or white poppy, is the ſort cultivated by the preparers of opium in the eaſtern countries, and for medicinal uſes in this.

Poppy heads, boiled in water, impart to the menſtruum their narcotic juice, together with the other juices, which they have in common with vegetable matters in general. The liquor ſtrongly preſſed out, ſuffered to ſettle, clarified with whites of eggs, and evaporated to a due conſiſtence, yields about one-fifth, or one-ſixth the weight of the heads, of extract. This poſſeſſes the virtues of opium; but requires to be given in double its doſe to anſwer the ſame intention, which it is ſaid to perform without occaſioning a nauſea and giddineſs, the uſual conſequences of the other. (See the *Edinburgh eſſays abridg.* vol. i. pag. 158 and 132.) A ſtrong decoction of the heads, mixed with as much ſugar as is ſufficient to reduce it into the conſiſtence of a ſyrup, becomes fit for keeping in a liquid form; and is the only officinal preparation of the poppy. Both theſe preparations are very uſeful, though liable to variation in point of ſtrength: nor does this inconvenience ſeem avoidable by any care in the preſcriber, or the operator; ſince the poppy heads themſelves (according to the degree of maturity, and the ſoil and ſeaſon of which they are the produce) contain different proportions of the narcotic matter to the other juices of the plant; as has been obſerved in the Pharmacopœia reformata.

The ſeeds of the poppy are by many reckoned ſoporific: Juncker ſays, they have the ſame quality with thoſe of hyoſcyamus, and

Herman looks upon them as a good ſubſtitute to opium; miſled probably by an obſervation which holds in many plants, that the ſeeds are more efficacious than the veſſels in which they are contained.

The ſeeds of the poppy have nothing of the narcotic juice which is lodged in their covering, and in the ſtalks; an oil expreſſed from them has been uſed for the ſame purpoſes as oil olive; and the ſeeds themſelves taken as food. Their taſte is ſweetiſh and farinaceous.

PAPAVERIS ERRATICI, *ſeu Papaveris rhœados flores: Papaveris erratici majoris C. B.* Red poppy or corn-roſe; the greater of the hairy wild poppies, with deep red flowers and dark coloured ſeeds; its flowers [*L. E.*]

The flowers of this plant yield upon expreſſion a deep red juice, and impart the ſame colour by infuſion to aqueous liquors. A ſyrup of them is kept in the ſhops: this is valued chiefly for its colour; though ſome expect from it a lightly anodyne virtue.

PARALYSIS *flores: Verbaſculi pratenſis odorati C. B. Primulæ veris majoris Raii.* Cowſlips: the flowers [*L. E.*]

This plant grows wild in marſhes and moiſt meadows. The flowers appear in April; they have a pleaſant ſweet ſmell, and a ſubacrid, bitteriſh, ſomewhat aſtringent taſte. An infuſion of them, uſed as tea, is recommended as a mild corroborant, in nervous complaints, and in ſome female diſorders proceeding from a deficiency of the menſtrual purgations A ſtrong infuſion of them forms, with a proper quantity of ſugar, an agreeable ſyrup, which has long maintained a place in the ſhops. By boiling, even for a little time, their fine flavour is deſtroyed.

PAREIRA BRAVA [*E.*] *Ciſſampelos Pareira Lin.*

This is the root of an American convolvulus, brought to us from Brazil, in pieces of different ſizes, ſome no bigger than a man's finger, others as large as a child's arm. It is crooked, and variouſly wrinkled on the ſurface; outwardly of a dark colour, internally of a dull yellowiſh, and interwoven with woody fibres, ſo that upon a tranſverſe ſection, a number of concentric circles appear, croſſed with fibres, which run from the center to the circumference. It has no ſmell; the taſte is a little bitteriſh, blended with a ſweetneſs, like that of liquorice. This root is highly extolled by the Brazilians and Portugueſe, in a great variety of diſeaſes, particularly againſt ſuppreſſions of urine, nephritic pains, and the calculus. In the two firſt, Geoffroy ſays he has given it with good ſucceſs, and that the patient was almoſt inſtantly relieved by it, a copious diſcharge of urine ſucceeding. He likewiſe obſerved large quantities of gravel, and even ſmall ſtones, voided after its uſe. This effect he attributes not to any lithontriptic power, but to its diſſolving the viſcid mucus, by which the ſabulous matter had been detained. He likewiſe relates, that he has had frequent experience of the good effects of this root in deterging and healing ulcers of the kidneys and bladder, where the urine came away purulent and mucous, and could not be voided at all without extreme pain; by the uſe of the *pareira*, the urine ſoon became clear, and of a due conſiſtence, and was evacuated freely; and, by joining to this medicine

dicine balſam of Copaiba, the ulcer perfectly healed. The attenuating quality, which he had diſcovered in this root, induced him to make trial of it in other diſeaſes, proceeding from tenacious juices, and in theſe likewiſe it fully anſwered his expectations. In humoral aſthmas, where the lungs are ſtuffed up, and the patient almoſt ſuffocated by thick phlegm, an infuſion of *pareira*, after many other medicines had proved ineffectual, occaſioned a plentiful expectoration, and ſoon completed a cure. In the jaundice, proceeding from thick bile, it did excellent ſervice: but in another icterical caſe, where the liver was ſwelled and hard, this medicine did no good. His doſe of the root in ſubſtance is from twelve grains to half a dram, in decoction two or three drams.

PARIETARIÆ, *ſeu Helxines folia: Parietariæ officinarum C. B.* Pellitory of the wall; the leaves [*L. E.*]

This is a ſmall plant growing upon old walls; of an herbaceous, ſubſaline taſte, without any ſmell. It is one of the five emollient herbs, and in this intention is occaſionally made uſe of. It is an ingredient in the nephritic decoction of the Edinburgh pharmacopœia. The expreſſed juice has been given in the doſe of three ounces as a diuretic.

PARTHENIUM, vide MATRICARIA.

PASTINACA HORTENSIS: *Paſtinaca latifolia ſativa Raii.* Garden parſneps.

PASTINACA SYLVESTRIS: *Paſtinaca ſylveſtris latifolia Raii.* Wild Parſneps.

The roots of the garden parſnep are uſed as food, and prove ſufficiently nutritious. The ſeeds of both ſorts are lightly aromatic; thoſe of the wild are ſtrongeſt.

PENTAPHYLLI *radix: Quinquefolii majoris repentis C. B. Potentillæ reptantis Lin.* Cinquefoil; the root [*L.*]

This grows plentifully in hedges, and by road-ſides. The root is moderately aſtringent; and as ſuch is ſometimes given internally againſt diarrhœæ and other fluxes; and employed in gargariſms for ſtrengthening the gums, &c. The cortical part of the root may be taken, in ſubſtance, to the quantity of a dram: the internal part is conſiderably weaker, and requires to be given in double the doſe to produce the ſame effect. It is ſeldom uſed but as an ingredient in the theriaca.

PEPONUM *ſemen: Peponis oblongi C. B.* The pumpion; its ſeeds [*E.*]

Theſe ſeeds are very rarely met with in the ſhops: in quality they are not different from thoſe of cucumbers, melons, and the others called cold ſeeds.

PERICLYMENUM, vide CAPRIFOLIUM.

PERSICARIÆ MITIS *folia: Perſicariæ maculoſæ Raii. Poligoni Perſicariæ Lin.* Spotted arſmart: the leaves.

This grows wild in moiſt watery places: the leaves ſomewhat reſemble thoſe of the *perſica malus*, and have generally a blackiſh ſpot in the middle: their taſte is roughiſh and ſubſaline. This herb is recommended chiefly for external purpoſes. Tournefort aſſures us (in the Memoirs of the French academy, 1703) that it is one of the beſt vulneraries and antiſeptics he knows, and that a decoction of it in wine ſtops gangrenes in a ſurpriſing manner. The preſent practice however has no dependance on it.

PERSICARIÆ URENTIS *folia: Perſicariæ vulgaris acris, ſive hydropiperis Raii.* Biting arſmart, lakeweed, or water pepper; the leaves [*E.*]

This ſort is readily diſtinguiſhable from the former, by its pungent, biting, pepper-like taſte. Its virtues are thoſe of an acrid ſtimulating medicine: in phlegmatic habits, it promotes the urinary diſcharge, and has frequently done good ſervice in ſcorbutic complaints. The freſh leaves are ſometimes applied externally for cleanſing old fiſtulous ulcers, and conſuming fungous fleſh: for theſe purpoſes they are ſaid to be employed by the farriers, among whom they have been principally made uſe of.

PERSICÆ MALI *flores: Perſicæ molli carne, &c. C. B. Amygdali Perſicæ Lin.* The peach tree; its flowers [*E.*]

Peach flowers have an agreeable ſmell, and a bitteriſh taſte: diſtilled, without any addition, by the heat of a water-bath, they yield one-ſixth their weight, or more, of a whitiſh liquor, which, as Mr. Bolduc obſerves, communicates to a large quantity of other liquids, a flavour like that of the kernels of fruits. An infuſion in water of half an ounce of the freſh gathered flowers, or a dram of them when dried, ſweetened with ſugar, proves for children an uſeful laxative and anthelmintic. The leaves of the tree are, in this intention, ſomewhat more efficacious, though leſs agreeable. The fruit has the ſame quality with the other ſweet fruits, that of abating heat, quenching thirſt, and gently looſening the belly.

PERUVIANUS CORTEX [*L. E.*] *Chinchona officinalis Lin.* Peruvian bark; the bark of a tall ſlender tree, growing in Peru. It is brought to us in pieces of different ſizes, ſometimes rolled up into ſhort thick quills, and ſometimes flat. The outſide is browniſh and generally covered in part with a whitiſh moſs; the inſide is of a yellowiſh, reddiſh, or ruſty iron colour. It has a lightly aromatic ſmell, ſomewhat muſty, yet not diſagreeable; a bitteriſh, aſtringent taſte, which dwells long upon the tongue, accompanied with a degree of aromatic warmth. The ſmall, thin, flat pieces, are by ſome accounted the beſt; by others, the quill ſort, with the roughest coat, eſpecially if of a bright cinnamon colour on the inſide; though the large flat pieces, whether rough or ſmooth, of a lighter or darker colour, are often of equal goodneſs. The beſt bark is that which is ſtrongeſt in ſmell and taſte: this likewiſe proves friable between the teeth, and does not ſeparate into fibres; it breaks, not ſhivery, but cloſe and ſmooth.

The virtues of this bark, as a febrifuge, were diſcovered by the Indians about the year 1500. Europe did not become acquainted with it till 1649: nor was it received into general practice till ſeveral years after this; ſome ill conſequences, enſuing from its imprudent uſe, having brought it for a time into diſrepute. At preſent, it is looked upon as the moſt effectual remedy in intermittent fevers of almoſt every kind, and ſafe in all ages and conſtitutions; provided it be judiciouſly and ſeaſonably adminiſtered, and due regard be had to the circumſtances of the diſeaſe. The modern practice, previous to the uſe of this medicine, uſually gives an emetic at the beginning of a paroxyſm. In ſome caſes a cathartic, and in plethoric habits venæſection, are premiſed. Theſe render the bark not only more ſafe, but likewiſe more certain and ſpeedy in its operation. Where theſe evacuations are neglected, or not ſufficiently plentiful, the diſeaſe, if of long ſtanding, ſcarce yields to the *cortex*; or if it appear at length ſubdued, yet the patient does not recover his ſtrength, and ſoon ſuffers a relapſe. The uſe of the bark is begun at the end of a paroxyſm, and repeated, in the quantity of half a dram (more or leſs, according to the circumſtances of the patient) every third or fourth hour during the intermiſſion. Where the fever is of the bilious kind, and accompanied with great heat, a little nitre is joined. In all caſes, moderate exerciſe generally promotes its effect. At firſt, it uſually looſens the belly, and ſometimes operates as if a cathartic had been taken; and by theſe means ſupplies the omiſſion of evacuations before its exhibition. If the purging continue, the medicine does not anſwer the purpoſes intended by it. In ſuch caſe, a little opium is added, which effectually ſuppreſſes the flux. If after this the patient continue too coſtive, recourſe is had to glyſters. The looſeneſs, however, ought not to be ſtopt too ſoon: on the contrary, where the bark does not itſelf produce this effect, it is neceſſary, as Dr. Mead informs us, to join to it a little rhubarb, ſo as to occaſion for a time two ſtools a day; by theſe means the diſeaſe is more effectually cured, and leſs ſubject to be followed by a dropſy, or ill habit of body: after a dram or two of rhubarb have been taken, it is to be diſcontinued, and the bark exhibited by itſelf. After the fever has been removed, the medicine is continued for ſome time longer, to prevent a relapſe; and evacuations, unleſs abſolutely neceſſary, abſtained from. The diſeaſe is nevertheleſs ſeldom completely cured before ſome very conſiderable evacuation, either by ſtool, urine, or perſpiration, enſues: if this do not ſucceed ſpontaneouſly, cathartics, diuretics, or diaphoretics, are given in conjunction with the bark, otherwiſe the patient continues weak, and without appetite, till either the diſeaſe returns, or changes into one of a different kind.

In ſymptomatic agues, hectic and purulent fevers, cacochymic habits, and where the hypochondres are ſwelled and diſtended, this medicine is improper, and for the moſt part prejudicial. Its manifeſt aſtringency forbids its uſe in obſtructions of the abdominal viſcera, or ſuppreſſions of any critical evacuation; until the obſtruction be firſt removed, or the evacuation have had its due courſe.

In acute, inflammatory, or malignant fevers, the bark does not ſeem to have any good effect. Nevertheleſs, in the decline of long nervous fevers, or after a remiſſion, when from bad habit, old age, fatigue, or the like, the patient is extremely weak, and the pulſe low, the *cortex* proves a medicine of excellent ſervice; provided there be no extravaſation, that the veſſels remain entire, and pus be not already formed.

Peruvian bark has likewiſe been found eminently ſerviceable in gangrenes and mortifications, proceeding either from an internal or external cauſe. In all the caſes of this kind, where it proved ſucceſsful, it occaſioned a kind of ſuppuration, which degenerated when the uſe of the medicine was diſcontinued, and again turned kindly upon reſuming it. Some have been hence induced to try the *cortex* in variolous caſes, where either the puſtules did not rightly ſuppurate, or petechiæ ſhewed a diſpoſition to a gangrane; and here likewiſe it anſwered expectation: the empty veſicles filled with matter, watery ſanies changed into thick white pus, the petechiæ became gradually of a pale colour, and at length diſappeared, and the pox began to turn ſooner than was expected. See the *Edinburgh medical eſſays.*

The bark has been applied likewiſe, and not without ſucceſs, to the cure of periodic head-achs, hyſteric and hypochondriac fits, and other diſorders, which have regular intermiſſions. By its aſtringency and aromatic quality, it ſtrengthens the whole nervous ſyſtem, and proves uſeful in weakneſs of the ſtomach, and ſundry chronical diſorders, proceeding from too great laxity of the fibres. In obſtinate uterine fluxes, and old gleets, bark joined with chalybeates has good effects.

The virtues of Peruvian-bark reſide chiefly in a reſinous ſubſtance, and hence are extracted in perfection by rectified ſpirit. By ſtrong coction in water, the reſin is melted out, and mingled with the water; which whilſt hot, appears tranſparent, but in cooling, grows turbid, and depoſits great part of the reſin to the bottom. Water elevates in diſtillation the aromatic part of the bark; pure ſpirit brings over nothing. Hence an aqueous extract proves not only leſs in quantity, but likewiſe inferior in quality to one made with rectified ſpirit. Proof ſpirit extracts the virtues of this drug in tolerable perfection, in the cold; heat enables it to take up more than it can retain when cold. Spirit of ſal ammoniac, prepared with fixt alkaline ſalts, gains very little from the *cortex*, either with or without heat; the ſpirit prepared with quicklime, and the dulcified ſpirit, in a few hours become ſtrongly impregnated with its ſmell and taſte.

The officinal preparations of bark are, an extract [*L. E.*] reſin [*E.*] ſpirituous tincture [*L. E.*] tincture in volatile ſpirit [*L.*] and compound tincture [*E.*] It is an ingredient alſo in the ſtomachic tincture [*E.*]

The ſubſtances uſually joined with bark in preſcription ſeem calculated either to promote its efficacy, or merely for reducing it into the intended form; without much regard to its agreeableneſs, and the conveniency of taking it. This is nevertheleſs a point of great conſequence, as its taſte, and the quantity which is neceſſary, make the patient too frequently loath it, before enough has been taken to produce the deſired effect. If deſigned to be given in the ſolid form of a bolus, electary, &c. it ſhould be made up, not, as is cuſtomary, with ſyrups, but with mucilages: with the former, it ſticks about the mouth and fauces, whence its taſte remains for a conſiderable time; with the latter, it paſſes freely, ſcarce leaving any taſte in the mouth. Aromatics do not prevent the taſte of the bark from diſcovering itſelf; extract of liquorice very effectually conceals it. The extract of logwood alſo, joined to that of bark, and a proper quantity of mucilage, form a very elegant and agreeable compoſition.

* PERUVIANUS CORTEX RUBER: Red Peruvian Bark.

The red bark, as it is called, is in much larger and thicker pieces than the common. Moſt of the pieces are concave, though not rolled together, like the quilled bark. They break ſhort, like the beſt common bark; and appear evidently compoſed of three layers, The outer is thin, rugged, frequently covered with a moſſy ſubſtance, and of a reddiſh brown colour. The middle is thicker, more compact, and of a darker colour: it is very brittle and reſinous. The innermoſt layer is more woody and fibrous, and of a brighter red. In powdering this bark, the middle layer, which ſeems to contain the greateſt proportion of reſinous matter, does not break ſo readily as the reſt; a circumſtance to be attended to, leſt the moſt active part ſhould be left out of the fine powder.

This red bark to the taſte diſcovers all the peculiar flavour of the Peruvian bark, but much ſtronger than the common officinal ſort.

With reſpect to medical properties, from numerous and repeated trials it appears, that the red bark poſſeſſes the ſame virtues with the common, but in a much higher degree. A ſingle half ounce of this has radically cured an obſtinate intermittent, where many ounces of the other kind had either had no effect, or merely a temporary one.

There have been lately diſcovered in the province of *Santa-Fe*, four degrees and a half north of the equator, two kinds of the chinchona, one of which appears to be the ſame with the red bark of Peru; the other, one of the white ſpecies. This is a fortunate diſcovery, as it points out a new ſtore of this moſt valuable medicine, when the ancient ones ſhall be exhauſted.

PETROLEUM [*E.*] Rock oil.

This is a general name for ſundry liquid bitumens, or mineral oils, which ſpontaneouſly exude from the earth, or from clefts of rocks. Theſe oils are found in almoſt all countries, but in greateſt quantities in the warmer ones. Some are met with in different parts of England; and many of our common bituminous minerals, as pit-coal, &c. afford, on diſtillation, oils not greatly different.

The fineſt ſort of this commodity comes from the dutchy of Modena in Italy, where three different kinds are found; the beſt is almoſt as clear, fluid, and tranſparent as water, of a highly penetrating, yet not diſagreeable ſmell, ſomewhat like that of rectified oil of amber: the ſecond ſort is of a clear yellow colour, not ſo fluid as the former, leſs penetrating, and partaking more of the oil of amber ſmell: the third, or worſt, is of a blackiſh red colour, of a thicker conſiſtence, and more diſagreeable than the two foregoing. The firſt of theſe is very rarely met with in the ſhops; the ſecond, mixed with a little of the third, and ſome ſubtile oils, is uſually ſent us inſtead of it. Petroleum readily catches fire, and, if pure, burns entirely away: diſtilled, it becomes ſomewhat more pellucid than before (a ſmall quantity of yellowiſh matter remaining) and loſes much of its natural ſmell. It unites with the eſſential oils of vegetables, not at all with vinous ſpirits. The finer ſorts are ſo light as to ſwim upon the moſt highly rectified ſpirit of wine.

Petroleum is at preſent very rarely employed as a medicine, though if the finer kinds could be procured genuine, they ſhould ſeem to deſerve ſome notice: they are more agreeable than the oil of amber, and milder than that of turpentine; of the virtues of both of which they participate. They are principally recommended by authors for external purpoſes, againſt pains and aches, in paralytic complaints, and for preventing chilblains. For theſe intentions, ſome of the more common mineral oils have been made uſe of with good ſucceſs; an oil extracted from a kind of ſtone coal has been cried up among the common people, under the name of Britiſh oil, for rheumatic pains, &c. even this is often counterfeited by a ſmall portion of oil of amber added to the common expreſſed oils.

PETROLEUM BARBADENSE [*L.*] Barbadoes tar.

This is thicker than the foregoing petrolea, and nearly of the conſiſtence of common tar. It is of a reddiſh black colour, a diſagreeable ſmell, leſs pungent than the other ſorts. This bitumen is found in ſeveral of our American iſlands, where it is eſteemed by the inhabitants of great ſervice as a ſudorific, and in diſorders of the breaſt and lungs, though in caſes of this kind, attended with inflammation, it is certainly improper; they likewiſe apply it externally as a diſcutient, and for preventing paralytic diſorders. Among us it is rarely uſed, and not often to be met with genuine. The London college employs it as a menſtruum for ſulphur in the *balſamum ſulphuris Barbadenſe*, and directs an oil to be diſtilled from it: that of Edinburgh has not yet received it.

PETROSELINI MACEDONICI *ſemen: Apii Macedonici C. B.* Macedonian parſley; the ſeeds [*L.*]

PETROSELINI VULGARIS *ſemen, folia, radix: Apii hortenſis ſeu petroſelini vulgo C. B.* Common parſley; the roots, leaves [*E.*] and ſeeds [*L. E.*]

The former of theſe plants is ſometimes met with in our gardens; the latter is commonly cultivated for culinary purpoſes. The ſeeds of both have an aromatic flavour, and are occaſionally made uſe of as carminatives, &c. Thoſe of the Macedonian parſley are the ſtronger, though generally ſupplied by the other. The root of parſley is one of the five aperient roots, and in this intention is ſometimes made an ingredient in apozems and diet-drinks: if liberally uſed, it is apt to occaſion flatulencies, and thus, by diſtending the viſcera, produces a contrary effect to that intended by it; the taſte of this root is ſomewhat ſweetiſh, with a light degree of warmth and aromatic flavour. The ſeeds of the Macedonian parſley are an ingredient in mithridate and theriaca; and thoſe of the common in the electary of bay-berries [*L.*]

PEUCEDANI *radix: Peucedani Germanici C. B. Peucedani officinalis Lin.* Hogs fennel, or ſulphur-wort; the root.

This plant grows wild by the ſea ſhores, and in moiſt ſhady places. The roots have a ſtrong diſagreeable ſmell, ſomewhat reſembling that of ſulphureous ſolutions; and an unctuous, ſubacrid, bitteriſh taſte. They are looked upon as ſtimulating and attenuating, and ſuppoſed to promote expectoration and urine: the expreſſed juice was employed by the ancients, as an errhine in lethargic diſorders. The preſent practice pays no regard to them in any intention.

PHU, vide VALERIANA SYLVESTRIS.

PILOSELLA, vide AURICULA MURIS.

PIMENTA, vide PIPER JAMAICENSE.

PIMPINELLÆ SANGUISORBÆ *folia: Pimpinellæ ſanguiſorbæ* *minoris hirſutæ et lævis C. B.* Burnet; the leaves.

This grows wild upon dry chalky hills: ſuch as is cultivated in gardens, though preferred by ſome, is inferior in quality to the wild ſort. The leaves are mildly aſtringent, and have been ſometimes employed in this intention, in dyſenteries and hæmorrhages.

PIMPINELLÆ SAXIFRAGÆ *radix, ſemen, folia.* Burnet ſaxifrage; the root [*L. E.*] leaves and ſeeds [*E.*]

Three ſorts of this plant are taken notice of by medical writers:

1. *Pimpinella ſaxifraga major, umbella candida C. B.* This is the ſpecies celebrated by the German writers under the name of *pimpinella alba:* it is not very common in this country, and therefore our markets have been generally ſupplied with the following.

2. *Pimpinella ſaxifraga minor foliis ſanguiſorbæ Raii. Tragoſelinum alterum majus Tourn.* This is not unfrequently met with in dry paſture grounds.

3. *Pimpinella ſaxifraga minor C. B. foliis diſſectis Hiſt. Oxon.* This ſort is the moſt common in the fields about London: it grows taller than the others, but the leaves are leſs.

All theſe plants ſeem to be poſſeſſed of the ſame qualities, and to differ only in external appearance; and even in this, their difference is ſo inconſiderable, that Linnæus has joined them into one, under the general name of *pimpinella.* Our colleges, inſtead of the firſt, which has been generally underſtood as the officinal ſort, allow either of the others (which are more common) to be uſed promiſcuouſly.

The roots of pimpinella have a grateful, warm, very pungent taſte, which is entirely extracted by rectified ſpirit: in diſtillation, the menſtruum ariſes, leaving all that it had taken up from the root, united into a pungent aromatic reſin. This root promiſes, from its ſenſible qualities, to be a medicine of conſiderable utility; though little regarded in common practice: the only officinal compoſition in which it is an ingredient, is the *pulvis ari compoſitus* [*L.*] Stahl, Hoffman, and other German phyſicians, are extremely fond of it, and recommend it as an excellent ſtomachic, reſolvent, detergent, diuretic, diaphoretic, and alexipharmac. They frequently gave it, and not without ſucceſs, in ſcorbutic and cutaneous diſorders, foulneſs of the blood and juices, tumours and obſtructions of the glands, and diſeaſes proceeding from a deficiency of the fluid ſecretions in general. Boerhaave directs the uſe of this medicine in aſthmatic and hydropic caſes, where the ſtrongeſt reſolvents are indicated: the form he prefers is a watery infuſion; but the ſpirituous tincture poſſeſſes the virtues of the root in much greater perfection.

There is another ſpecies of pimpinella called *nigra,* from its root being externally of a bright black colour, whilſt thoſe of the foregoing ſorts are whitiſh: this is remarkable for its yielding an eſſential oil of a blue colour. It grows wild in ſome parts of Germany, Swiſſerland, &c. and is now and then met with in our gardens.

PINUS *nuclei et reſina: Pinus ſativæ C. B. et Pinus ſylveſtris C. B.* Pine tree; the kernels of its fruit or cones, and its reſin [*E.*]

The pine tree differs from the firs in having its leaves ſtanding in pairs, thoſe of the firs being ſolitary. The pine abounds with the ſame kind of reſinous juice as the fir trees (ſee the articles *Terebinthina* and *Thus vulgare.*) The kernels have a very pleaſant ſweet taſte, and appear to be nearly of the ſame quality with ſweet almonds: they are conſidered rather as dietetic than medicinal articles

PIPER NIGRUM [*L. E.*] Black pepper; the fruit of a plant growing in Java, Malabar, &c. gathered probably before it is fully ripe, and exſiccated in the ſun.

PIPER ALBUM [*L. E.*] White pepper; the fruit of the black pepper plant gathered when ripe, and decorticated by maceration in water. The grains, as brought to us, have ſometimes pieces of a dark coloured ſkin ſtill upon them.

PIPER LONGUM [*L. E.*] Long pepper. This is the fruit of a different plant growing alſo in the Eaſt-Indies. It is of a cylindrical figure, about an inch and a half in length; the external ſurface appears compoſed of numerous minute grains diſpoſed round the fruit in a kind of ſpiral direction.

All theſe ſpices have a pungent ſmell, and a very hot biting taſte. The long ſort, which is the hotteſt and ſtrongeſt, is moſt frequently made uſe of for medicinal purpoſes; the black, as being more grateful, for culinary ones; the white, which is the weakeſt of the three, is rarely employed for either. The warmth and pungency of theſe ſpices reſides chiefly in their reſinous part; their aromatic odour in an eſſential oil. The genuine diſtilled oil ſmells ſtrong of the pepper, but has very little acrimony; the remaining decoction inſpiſſated, yields an extract conſiderably pungent. A tincture made in rectified ſpirit is extremely hot and fiery; a few drops of it ſet the mouth as it were in a flame.

The white pepper is an ingredient in philonium and mithridate; the black, in the pulvis antilyſſus, electary of bayberries; confectio Paulina, and theriaca: the long, in the bitter wine, aromatic tincture, powder and pills, the compound powders of bole and ſcordium, the confectio Paulina, mithridate, and theriaca [*L.*]

PIPER JAMAICENSE [*L. E.*] Pimento, or Jamaica pepper; the *amomum* of many of the German writers.

This is the produce of our own plantations. It is the fruit of a large tree growing ſpontaneouſly in the mountainous parts of Jamaica, called by Sir Hans Sloane, *myrtus arborea, aromatica, foliis laurinis.* The ſmell of this ſpice reſembles a mixture of cinnamon, cloves, and nutmegs: its taſte approaches to that of cloves, or a mixture of the three foregoing; whence it has received the name of *all-ſpice.* The ſhops have been for ſome time accuſtomed to employ this aromatic as a ſuccedaneum to the more coſtly ſpices, and from them it has been introduced into our hoſpitals. The London college has given it a place in their diſpenſatory, and direct a ſimple water to be diſtilled from it, which poſſeſſes the flavour of the pimento in great perfection. It yields a large quantity of a pleaſant eſſential oil, which ſinks in water. This oil, recommended in the Pharmacopœia reformata, is now received into the Edinburgh Pharmacopœia. Rectified ſpirit extracts its pungency and flavour, and elevates nothing in diſtillation.

PIPER INDICUM: *Capſicum ſiliquis longis propendentibus Tourn. Capſicum annuum Lin.* Guinea pepper, or capſicum; the fruit.

This is an annual plant cultivated in our gardens; it ripens its red pods in September or October. The taſte of capſicum is extremely pungent and acrimonious, ſetting the mouth as it were on fire. It is rarely made uſe of in medicine, being chiefly employed for culinary purpoſes. A ſpecies of it, called in the Weſt-Indies bird pepper, is the baſis of a powder brought us thence under the name of *Cayan pepper*.

PIX LIQUIDA [*L. E.*] Tar; a thick, black, unctuous ſubſtance; obtained from old pines and fir-trees, by burning them with a cloſe ſmothering heat. It differs from the native reſinous juice of the trees (ſee *Terebinthina)* in having received a diſagreeable impreſſion from the fire, and containing a portion of the ſaline and other juices united with the reſinous and oily; by the mediation of theſe, a part of the terebinthinate oil proves diſſoluble in aqueous liquors, which extract little or nothing from the purer turpentines. Water impregnated with the more ſoluble parts of tar, proves, in conſequence of this hot pungent oil, warm and ſtimulating. It ſenſibly raiſes the pulſe and quickens the circulation. By theſe qualities, in cold languid phlegmatic habits, it ſtrengthens the ſolids, attenuates viſcid juices, opens obſtructions of the minuter veſſels, and promotes perſpiration and the fluid ſecretions in general; whilſt in hot bilious temperaments, it diſpoſes to inflammation, and aggravates the complaints which it has been employed to remove.

PIX ARIDA [*L. E.*] Dry or ſtone pitch.

This is the *pix liquida* exſiccated by heat: in this proceſs, a part of the acid and the more volatile oil are diſſipated along with the aqueous moiſture; and hence the product proves conſiderably leſs active. It is made uſe of only in external applications, as a warm adheſive, reſinous ſubſtance.

PIX NAVALIS. This is generally allowed to be the ſame with the foregoing dry pitch or inſpiſſated tar: hence in the Edinburgh pharmacopœia the terms *pix ſiccæ* and *pix navalis* are made ſynonymous. According to Geoffroy, it is compounded of a ſtrange mixture of tallow, tar, palimpiſſa, and an artificial black pitch; which artificial pitch is itſelf compoſed of tar and palimpiſſa; and this palimpiſſa is no other than an inſpiſſated tar; ſo that notwithſtanding this ſhow of compoſition, the reſult is only a mixture of pitch with a little tallow.

PIX BURGUNDICA [*L. E.*] Burgundy pitch. This is of a ſolid conſiſtence, yet ſomewhat ſoft, of a reddiſh brown colour, and more agreeable in ſmell than either of the foregoing. Geoffroy relates, that it is compoſed of gallipot (a ſolid whitiſh reſin which ſeparates from ſome of the *terebinthinæ* as they run from the tree) melted with common turpentine and a little of its diſtilled oil. Dale informs us, from the relation of a gentleman who ſaw the preparation of this commodity in Saxony (whence we are chiefly ſupplied with it), that it is no more than the common turpentine boiled a little.

All theſe ſubſtances are employed in the ſhops only in external compoſitions. The dry pitch and Burgundy pitch, are ingredients in ſeveral plaſters, ointments, and cerates: and tar gives name to one of the ointments.

PLANTAGINIS LATIFOLIÆ *folia, ſemen:* Common broad-leaved plantane, called *ſeptinervia,* from its having ſeven large nerves or ribs running along each leaf; the narrow-leaved ſort has only five ribs, and hence is named *quinquenervia.* They are both common in fields, and by road-ſides. The leaves are lightly aſtringent, and the ſeeds ſaid to be ſo; and hence they ſtand recommended in hæmorrhages, and other caſes where medicines of this kind are proper. The leaves bruiſed a little, are the uſual application of the common people to ſlight fleſh wounds. The Edinburgh college directs an extract to be made from the leaves.

PLUMBUM [*L. E.*] Lead.

This is the heavieſt of the metals except gold. It melts in a moderate heat, and if kept in fuſion, is ſoon converted partly into fume and partly into an aſh-coloured calx *(plumbum uſtum)*; this expoſed to a ſtronger fire, in ſuch a manner that the flame may play upon its ſurface, becomes firſt yellow, and afterwards of a deep red, *(minium* or red lead); if in this proceſs the fire be ſuddenly raiſed to a conſiderable height, the calx melts, aſſumes the appearance of oil, and on cooling forms a ſoft leafy ſubſtance of a yellowiſh or reddiſh colour *(litharge.)* The proper menſtruum of this metal is aquafortis: the vegetable acids likewiſe diſſolve it, but in very ſmall quantity: a quart of diſtilled vinegar will not take up a dram; expoſed to the ſteam of vinegar, it is by degrees corroded into a white powder *(ceruſſe)* which is conſiderably more eaſy of ſolution. The calces of lead diſſolve, by heat, in expreſſed oils; theſe mixtures are the baſis of ſeveral officinal plaſters and unguents. Cryſtals of this metal made with diſtilled vinegar (called, from their ſweetiſh taſte, *ſugar* of lead) and a tincture drawn from theſe and green vitriol, are likewiſe kept in the ſhops.

Preparations of lead, given internally, are ſuppoſed to incraſſate the fluids, abate inflammations, and reſtrain venereal deſires. The ſugar is a ſtrong aſtringent, and has been uſed, it is ſaid, with good ſucceſs, in hæmorrhages, the fluor albus, ſeminal gleets, &c. The tincture is recommended for the like purpoſes; and for checking immoderate ſweats in phthiſical caſes, whence it has been uſually called *tinctura antiphthiſica.* The internal uſe of this metal is nevertheleſs full of danger, and ought never to be ventured upon unleſs in deſperate caſes, after other medicines have been employed without taking effect: it often occaſions violent colics; and though it ſhould not prove immediately hurtful, its ill conſequences are ſure, though ſlow: tremors, ſpaſms, or lingering tabes, too frequently follow.

* Mr. Goulard, a ſurgeon of Montpellier, wrote a treatiſe, ſome few years ago, profeſſedly on the external uſe of lead, which has been the means of greatly extending the uſe of it. The baſis of his preparations is what he calls the extract of lead, which is a ſolution of litharge in ſtrong vinegar, by boiling it gently to the conſiſtence of a thin ſyrup, and after it has ſtood to ſettle, the clear part is to be poured off for uſe. A ſmall portion of this, diluted in a large quantity of ſoft water, makes his vegeto-mineral water, which is employed as a lotion or fotus, or boiled with bread to make a cataplaſm. The extract is likewiſe combined with unguentous matters into a variety of forms. Theſe preparations have been found of great utility in various caſes of inflammation, particularly of the

eryſipelatous kind, and in thoſe in conſequence of burns and ſcalds. Their application has not, in the opinion of moſt practitioners, been obſerved to produce any of thoſe affections of the nervous ſyſtem, which characterize the poiſonous effects of lead taken internally.

POLII, *ſeu Polii montani ſummitates.* Poley mountain; the tops [*L. E.*]

It has been diſputed among botanic writers, what ſpecies of poley ought to be employed in medicine. The London college allows the promiſcuous uſe of two, the *polium maritimum erectum Monſpeliacum C. B. Tucrum capitatum Lin.* and the *polium anguſtifolium Creticum C. B. Tucrum creticum Lin.* The firſt is ſometimes cultivated in our gardens, and is the ſort with which the ſhops have been generally ſupplied. They have both a light aromatic ſmell, and a bitteriſh taſte; that brought from Crete is the moſt agreeable. They ſtand recommended in catarrhs, uterine diſorders, &c. but at preſent are ſcarce otherwiſe made uſe of than as an ingredient in the mithridate and theriaca.

POLYGONATUM, vide Sigillum Salomonis.

POLYGONUM, vide Centinodium.

POLYPODII *radix: Filicis polypodii dictæ Herm.* Polypody; the root [*E.*]

Polypody is a capillary plant, growing upon old walls, the trunks of decayed trees, &c. That found upon the oak is generally preferred, though not ſenſibly different from the others. The roots are long and ſlender, of a reddiſh brown colour on the outſide, greeniſh within, full of ſmall tubercles, which are reſembled to the feet of an inſect; whence the name of the plant. The taſte of theſe roots is ſweetiſh and nauſeous.

Polypody has been employed in medicine for many ages; nevertheleſs its virtues remain as yet to be determined. The ancients held it to be a powerful purger of melancholic humours; by degrees, it came to be looked upon as an evacuator of all humours in general: at length, it was ſuppoſed only to gently looſen the belly; and afterwards even this quality was denied it: ſucceeding phyſicians declared it to be aſtringent; of this number is Boerhaave, who eſteems it moderately ſtyptic, and antiſcorbutic. For our own part, we have had no direct experience of it: nor is it employed in practice. It is probable that (as Juncker ſuppoſes) the freſh root may looſen the belly, and that it has not this effect when dry.

POLYTRICHUM, vide Trichomanes,

POMPHOLYX: a calx, or flowers, of zinc, produced in the furnaces where copper is made into braſs by calamine, the ore of zinc. It is found adhering to the covers of the crucibles, &c. either in form of thin cruſts, or of a light downy matter, generally of a pure white colour, though ſometimes yellowiſh. See Zincum.

POPULI NIGRÆ *gemmæ: Populi nigræ C. B.* The black poplar; its buds [*E.*]

The black poplar is a large tree, growing wild in watery places; it is eaſily raiſed and very quick of growth. The young buds or rudiments of the leaves, which appear in the beginning of ſpring, abound with a yellow, unctuous, odorous juice. They have hitherto been employed chiefly in an ointment, which received its name from them; though they are certainly capable of being applied to other purpoſes. A tincture of them made in rectified ſpirit, yields, upon being inſpiſſated, a fragrant reſin ſuperior to many of thoſe brought from abroad.

PORRI *radix: Porri communis capitati C. B.* Leeks; the root. This participates of the virtues of garlick, from which it differs chiefly in being much weaker. See ALLIUM.

PORTULACÆ *ſemen: Portulacæ hortenſis latifoliæ J. B.* Purſlane; the ſeeds.

This herb is cultivated in gardens for culinary uſes. The ſeeds are ranked among the leſſer cold ſeeds, and have ſometimes been employed in emulſions, and the like, along with the others of that claſs.

POTENTILLA, vide ARGENTINA.

PRASIUM, vide MARRUBIUM.

PRUNELLÆ, *ſeu Brunellæ folia: Prunellæ majoris foliis non diſſectis C. B. Prunellæ vulg. Lin.* Self-heal; the leaves [*E.*]

This plant grows wild in meadows and paſture grounds, and produces thick ſpikes of purpliſh flowers during the latter part of the ſummer. It has an herbaceous roughiſh taſte: and hence ſtands recommended in hæmorrhages and alvine fluxes: it has been principally celebrated as a vulnerary, whence its name; and in gargariſms for aphthæ, and inflammations of the fauces.

PRUNUS HORTENSIS. The plum tree. Three ſorts of plums are looked upon as articles of the materia medica. They are all met with in our gardens, but the ſhops are ſupplied with the fruit moderately dried from abroad.

PRUNA BRIGNOLENSIA: *Pruna ex flavo ruſeſcentia, mixii ſaporis, gratiſſima C. B.* The Brignole plum, brought from Provence under the name of prunelloes [*E.*]

PRUNA GALLICA [*L. E.*]: *Fructus Pruni fructu parvo, dulci, atro-cæruleo Tourn.* French or common prunes [*L. E.*] This is the plum called by our gardeners the little black damaſk.

PRUNA DAMASCENA: *Fructus Pruni fructu magno, dulci, atro-cæruleo Tourn.* Damaſcene plums, or damſons. This is the ſort called the great damaſk violet of Tours. It is ſeldom met with dry in the ſhops, and is generally ſupplied by the common prune.

The medical effects of the damſon and common prunes are, to abate heat, and gently looſen the belly: which they perform by lubricating the paſſage, and ſoftening the excrement. They are of conſiderable ſervice in coſtiveneſs, accompanied with heat or irritation, which the more ſtimulating cathartics would tend to aggravate. Where prunes are not of themſelves ſufficient, their effects may be promoted by joining with them a little rhubarb or the like: to which may be added ſome carminative ingredient, to prevent their occaſioning flatulencies. Prunelloes have ſcarce any laxative quality: theſe are mild grateful refrigerants, and by being occaſionally kept in the mouth, uſefully allay the thirſt of hydropic perſons.

PRUNA SYLVESTRIA: *Fructus pruni ſylveſtris C. B. Pruni ſpinoſæ Lin.* Sloes; the fruit of the common black thorn, or ſloe buſh [*L. E.*]

Theſe have a very rough, auſtere taſte, eſpecially before they have been mellowed by froſts. The juice of the unripe fruit, inſpiſſated to a proper conſiſtence, is called *acacia Germanica*, and uſually ſold in the ſhops for the true Egyptian acacia. It is equally aſtringent with the Egyptian ſort, but has more of a ſharp or tartiſh taſte, without any thing of the ſweetiſh reliſh of the other. The inſpiſſated juice is directed as an officinal by the Edinburgh college, and a conſerve of the fruit by the London.

PSYLLI *ſemen: Pſyllii majoris erecti C. B. Plantaginis Pſyllii Lin.* Fleawort; the ſeeds.

This is a ſort of plantane, growing wild in the warmer climates, and ſometimes met with in our gardens. It differs from the common plantanes in having its ſtalks branched, with leaves upon them; hence it is named by Ray, *plantago caulifera.* The ſeeds have been uſually brought from the ſouth of France; they are ſmall, but ſuppoſed to reſemble in ſhape a flea, whence the Engliſh name of the plant. Theſe ſeeds have a nauſeous, mucilaginous taſte: boiled in water, they yield a conſiderable quantity of mucilage, which is ſometimes made uſe of in emollient glyſters and the like. Alpinus relates, that among the Egyptians this mucilage is given in ardent fevers, and that it generally either looſens the belly or promotes ſweat.

PTARMICÆ *radix: Dracunculi pratenſis, ſerrato folio C. B. Achillææ Ptarmicæ Lin.* Sneezewort, or baſtard pellitory: the root [*E.*]

This grows wild upon heaths and in moiſt ſhady places; the flowers, which are of a white colour, come forth in June and July. The roots have an acrid ſmell, and a hot biting taſte. Chewed they occaſion a plentiful diſcharge of ſaliva; and when powdered and ſnuffed up the noſe, provoke ſneezing. Theſe are the only intentions to which they have been uſually applied.

PULEGII *folia: Pulegii latifolii C. B. Menthæ aquaticæ ſeu pulegii vulgaris Tourn.* Pennyroyal; the leaves [*L. E.*]

This plant grows ſpontaneouſly in ſeveral parts of England upon moiſt commons, and in watery places; trailing upon the ground, and ſtriking roots at the joints. Our markets have been for ſome time ſupplied with a garden ſort, which is larger than the other, and grows upright: this is called by Mr. Dale *pulegium erectum.*

Pennyroyal is a warm, pungent herb, of the aromatic kind, ſimilar to mint, but more acrid and leſs agreeable. It has long been held in great eſteem, and not undeſervedly, as an aperient, and deobſtruent, particularly in hyſteric complaints, and ſuppreſſions of the uterine purgations. For theſe purpoſes, the diſtilled water is generally made uſe of, or what is of equal efficacy, an infuſion of the leaves. It is obſervable, that both water and rectified ſpirit extract the virtues of this herb by infuſion, and likewiſe elevate greateſt part of them, in diſtillation.

In the ſhops are kept a ſimple [*L. E.*] and ſpirituous [*L.*] water and eſſential oil [*L. E.*] of the plant; this herb is uſed alſo in the compound valerian water and troches of myrrh [*E.*] and its ſimple water for making the lac ammoniaci [*L.*] and the camphorated emulſion [*E.*]

PULEGII CERVINI *folia: Pulegii anguſtifolii C. B. Menthæ cervinæ Lin.* Harts pennyroyal; the leaves.

This ſpecies is met with, though not very often, in our gardens. It is ſomewhat ſtronger, yet rather more agreeable, than the foregoing, both in taſte and ſmell.

PULMONARIÆ MACULOSÆ *folia: Pulmonariæ Italorum ad bugloſſam accedentis J. B. Pulmonariæ officinalis Lin.* Spotted lungwort, or ſage of Jeruſalem; the leaves [*E.*]

This is met with in gardens: the leaves are of a green colour ſpotted with white; of an herbaceous ſomewhat mucilaginous taſte, without any ſmell. They ſtand recommended againſt ulcers of the lungs, phthiſes, and ſimilar diſorders: nevertheleſs experience gives little countenance to theſe virtues, nor does the preſent practice expect them.

* PULSATILLA. *Pulſatilla nigricans Stœrck Ph. Edinb. Pulſatilla flore minore nigricante C. B. Anemone pratenſis Lin.* A ſpecies of anemone, much reſembling the pulſatilla vulgaris or paſque flower, but its flower is leſs, and of a darker hue. It is a native of the ſouth of Germany, and other neighbouring countries.

All the anemonies have a conſiderable degree of acrimony; but this ſeems to poſſeſs the largeſt ſhare. The whole plant, when chewed, impreſſes the tongue with a ſharp burning, durable taſte; the root is milder than the other parts. On diſtilling the plant with water, the liquor which comes over is ſtrongly impregnated with its virtues; and the remaining extract is alſo conſiderably active.

Dr. Stœrck of Vienna, from numerous trials, celebrates its efficacy in various chronic diſeaſes of the eye; in venereal nodes and nocturnal pains; in foul ulcers with caries; in ſerpego; and ſuppreſſed menſes.

The doſe of the diſtilled water is half an ounce twice a day; of the extract, reduced to powder with ſugar, five or ſix grains.

PYRETHRI *radix: Pyrethri flore bellidis C. B. Anthemis Pyrethri Lin.* Pellitory of Spain; the root [*L. E.*]

This plant, though a native of the warm climates, bears the ordinary winters of this: and often flowers ſucceſſively from Chriſtmas to May; the roots alſo grow larger with us than thoſe with which the ſhops are uſually ſupplied from abroad.

Pellitory root has no ſenſible ſmell; its taſte is very hot and acrid, but leſs ſo than that of arum or dracunculus: the juice expreſſed from it has ſcarce any acrimony, nor is the root itſelf ſo pungent, when freſh, as after it has been dried. Water, aſſiſted by heat, extracts ſome ſhare of its taſte; rectified ſpirit the whole: neither of them elevate any thing in diſtillation. The principal uſe of pyrethrum in the preſent practice is as a maſticatory, for promoting the ſalival flux, and evacuating viſcid humours from the head and neighbouring parts. By theſe means it often relieves the tooth-ach, ſome kinds of pains of the head, and lethargic complaints.

* QUASSIA. *Quaſſia Ph. Edinb. Lignum Quaſſiæ Amœnit. Acad.* vol. vi. *Bois de Coiſſi Fermin Surinam.* Quaſſy Root.

This is the root of a tree growing in Surinam, called by Linnæus Quaſſia amara. This root is as thick as a man's arm. Its wood is whitiſh, hard, ſolid, and tough, becoming yellowiſh on expoſure to the air.

Quaſſi root has no ſenſible ſmell ; its taſte is that of a pure bitter, more intenſe and durable than that of almoſt any known ſubſtance. It communicates its bitter to watery infuſions and decoctions, and its ſpirituous tinctures are all equally bitter, of a pale yellow hue, which is not blackened by the addition of martial vitriol.

The flowers are uſed by the natives, and looked upon by them as an excellent ſtomachic. The root was a ſecret remedy uſed by a negro, named Quaſſi, in the fatal fevers of that country, from whom it was purchaſed by Don Rolander, a Swede, who returned in 1756. A confirmation of its medical powers appears in a letter from Mr. Farley, a practioner in Antigua, printed in the Phil. Tranſact. vol. LVIII. He found it remarkably efficacious in ſuppreſſing vomitings, ſtopping a tendency to putrefaction, and removing fevers. It may be uſed in infuſions, or extract ; the latter, made into pills, on account of the intenſe bitterneſs of the drug, is preferable for delicate ſtomachs.

QUERCUS *cortex : Quercus cum longis pediculis C. B. Quercus roboris Lin.* Oak tree ; the bark [*E.*]

This bark is a ſtrong aſtringent ; and hence ſtands recommended in hæmorrhages, alvine fluxes, and other præternatural or immoderate ſecretions.

* QUERCUS MARINA *ſive fucus veſiculoſus : Fucus maritimus ſive quercus maritima veſiculas habens C. B. Fucus veſiculoſus Lin.* Sea Wrack or Sea Oak : a ſoft, very ſlippery, marine plant ; common upon rocks that are left dry at the ebb tide ; with the leaves ſomewhat reſembling in ſhape thoſe of the oak tree ; the ſtalks running along the middle of the leaves, and terminated by watery bladders containing either air or a ſlippery fluid. The veſicles begin in March to fill with a thin juice ; and about the end of July they burſt, and diſcharge a matter as thick as honey.

Dr. Ruſſel relates, that he found this plant an uſeful aſſiſtant to ſea water in the cure of diſorders of the glands : that he gave it in powder to the quantity of a dram, and that in large doſes it nauſeated the ſtomach : that by burning in the open air it was reduced into a black ſaline powder * ; which ſeemed, as an internal medicine, greatly to excel the officinal burnt ſponge ; which was uſed with benefit, as a dentifrice, for correcting laxities of the gums : that the juice of the veſicles, after ſtanding to putrify, yields, on evaporation, an acrid pungent ſalt, amounting to about a ſcruple from two ſpoonfuls ; that the putrified juice, applied to the ſkin, ſinks in immediately, excites a ſlight ſenſe of pungency, and deterges like a ſolution of ſoap : that one of the beſt applications for diſcuſſing hardneſs, particularly in the decline of glandular ſwellings, is a mixture of two pounds of the juicy veſicles, gathered in July, with a quart of ſea water, kept in a glaſs veſſel for ten or twelve days, till the liquor comes near to the conſiſtence of very thin honey : the parts affected are to be rubbed with the ſtrained liquor twice or thrice a day, and afterwards waſhed clean with ſea water.

RAPHANI RUSTICANI *radix : Raphani ruſticani C. B. Cochleariæ folio cubitali Tourn. Cochleariæ Armoraciæ Lin.* Horſeradiſh ; the root [*L. E.*]

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* Æthiops vegetabilis D. Ruſſel.

This plant is ſometimes found wild about river-ſides, and other moiſt places; for medicinal and culinary uſes, it is cultivated in gardens. It flowers in June, but rarely perfects its ſeeds in this country. Horſeradiſh root has a quick pungent ſmell, and a penetrating acrid taſte; it nevertheleſs contains in certain veſſels a ſweet juice, which ſometimes exudes upon the ſurface. By drying, it loſes all its acrimony, becoming firſt ſweetiſh, and afterwards almoſt inſipid. If kept in a cool place, covered with ſand, it retains its qualities for a conſiderable time. The medical effects of this root are to ſtimulate the ſolids, attenuate the juices, and promote the fluid ſecretions. It ſeems to extend its action through the whole habit, and effect the minuteſt glands. It has frequently done good ſervice in ſome kinds of ſcurvies and other chronic diſorders proceeding from a viſcidity of the juices, or obſtructions of the excretory ducts. Sydenham recommends it likewiſe in dropſies, particularly thoſe which ſometimes follow intermittent fevers. Both water and rectified ſpirit extract the virtues of this root by infuſion, and elevate them in diſtillation. Along with the aqueous fluid, an eſſential oil ariſes, poſſeſſing the whole taſte and pungency of the horſeradiſh. The college has given us a very elegant compound water, which takes its name from this root.

REALGAR, a foſſil compoſed of arſenic and ſulphur. Vide ARSENICUM.

REGINA PRATI, v. ULMARIA.

RHABARBARUM [*L.E.*] *Rhei undulati Lin.* Rhubarb; the root of a plant of the dock kind, which grows ſpontaneouſly in China, and endures the colds of our own climate. Two ſorts of rhubarb are met with in the ſhops. One is imported from Turkey and Ruſſia, in roundiſh pieces freed from the bark, and a hole through the middle of each; they are externally of a yellow colour, and on cutting appear variegated with lively reddiſh ſtreaks. The other, which is leſs eſteemed, comes immediately from the Eaſt-Indies, in longiſh pieces, harder, heavier, and more compact than the foregoing. The former ſort, unleſs kept very dry, is apt to grow mouldy and worm-eaten; the latter is leſs ſubject to theſe inconveniencies. Some of the more induſtrious artiſts are ſaid to fill up the worm holes with certain mixtures, and to colour the outſide of the damaged pieces with powder of the finer ſorts of rhubarb, and ſometime with cheaper materials: this is often ſo nicely done, as effectually to impoſe upon the buyer, unleſs he very carefully examines each piece. The marks of good rhubarb are, that it be firm and ſolid, and not flinty; that it be eaſily pulverable, and appear, when powdered, of a fine bright yellow colour: that, upon being chewed, it imparts to the ſpittle a ſaffron tinge, without proving ſlimy or mucilaginous in the mouth. Its taſte is ſubacrid, bitteriſh, and ſomewhat aſtringent; the ſmell lightly aromatic.

Rhubarb is a mild cathartic, which operates without violence or irritation, and may be given with ſafety even to pregnant women and children. Beſides its purgative quality, it is celebrated for an aſtringent one, by which it ſtrengthens the tone of the ſtomach and inteſtines, and proves uſeful in diarrhœæ and diſorders proceeding from a laxity of the fibers. Rhubarb in ſubſtance operates more powerfully as a cathartic than any of the preparations of it. Watery tinctures purge more than the ſpirituous ones ; whilſt the latter contain in greater perfection the aromatic, aſtringent, and corroborating virtues of the rhubarb. The doſe, when intended as a purgative, is from a ſcruple to a dram or more.

The Turkey rhubarb is, among us, univerſally preferred to the Eaſt-India ſort, though this latter is, for ſome purpoſes at leaſt, equal to the other. It is manifeſtly more aſtringent, but has ſomewhat leſs of an aromatic flavour. Tinctures drawn from both with rectified ſpirit, have nearly the ſame taſte. On diſtilling off the menſtruum, the extract left from the tincture of the Eaſt-India rhubarb proved conſiderably the ſtronger. They are both the produce of the ſame climate, and probably the roots of the ſame plant taken up at different ſeaſons, or cured in a different manner.

The officinal preparations of this drug are, roaſted rhubarb [*L.*] a watery infuſion [*E.*] and vinous and ſpirituous tinctures [*L. E.*] It is an ingredient in various compoſitions, as the ſyrup of ſena and rhubarb, dyſenteric electary, ſtomachic pills [*E.*] cephractic pills [*L.*] &c.

RHAMNUS CATHARTICUS, vide SPINA CERVINA.

RHAPONTICI *radix: Rhabarbari Dioſcoridis et antiquorum Tourn. Rhei Rhapontici Lin.* Rhapontic ; the root of a large roundiſh-leaved dock, growing wild on the mountain Rhodope in Thrace, whence it was brought into Europe, about the year 1610, by Alpinus : it bears the hardeſt winters of this climate, and is not unfrequent in our botanic gardens. The root of this plant (which appears evidently to have been the rhubarb of the ancients) is by ſome confounded with the modern rhubarb, though conſiderably different both in appearance and quality. The rhapontic is of a duſky colour on the ſurface, of a looſe ſpongy texture ; conſiderably more aſtringent, but leſs purgative, than rhubarb ; in this latter intention, two or three drams are required for a doſe.

* RHODODENDRON CRYSANTHEMUM. This plant is a new ſpecies of the rhododendron of Linnæus, diſcovered by Profeſſor Pallas; a ſhrub growing near the tops of the high mountains in Siberia.

It is called by the natives chei, or tea, from their commonly drinking a weak infuſion of it, as we do of the Chineſe plant of that name. A ſtronger preparation of it is, however, uſed by them as a powerful medicine in arthritic and rheumatic diſorders. Two drams of the ſtalks and leaves together, they infuſe in nine or ten ounces of boiling water for a night, in the heat of an oven. This is drunk next morning for a doſe ; which occaſions heat, a degree of intoxication, with a ſingular uneaſy kind of ſenſation, and a ſort of vermiculation in the affected parts. The patient is not permitted to quench the thirſt this medicine occaſions, as liquids would produce vomiting, and diminiſh the effect of the remedy. In a few hours, all diſagreeable ſymptoms go off, commonly with two or three ſtools ; and the patient finds his diſeaſe greatly relieved. A repetition of the doſe twice or thrice generally completes the cure.

Dr. Home has made trial of this remedy in the infirmary at Edinburgh, and the reſult of his trials, as publiſhed in his Clenical Caſes and Experiments, is, that it is a very powerful ſedative, remarkably diminiſhing the frequency of the pulſe; but that it was not peculiarly efficacious in removing the acute rheumatiſm.

RHUS OBSONIORUM, vide SUMACH.

RIBESIA: *fructus Ribes vulgaris fructu rubro Raii.* Red currant buſh; the berries [*E.*]

Theſe have a cool, acidulous, ſweet taſte, ſufficiently agreeable both to the palate and ſtomach. The college of Edinburgh directs a jelly to be made from them with ſugar; but at preſent they are rather looked upon as a dietetic than a medicinal article.

* RICINUS *Americanus major, caule vireſcente H. R. P. Ricinus vulgaris C. B. & Lin. Palma-chriſti,* Mexico-ſeed: with the fruit triangular, the ſeed furniſhed with a little knob at one end, externally variegated with blackiſh and whitiſh ſtreaks, reſembling both in ſhape and colour the inſect *ricinus* or tick.

There are four or five ſorts of ricinus, that grow in different parts of Africa and America, which have much the ſame virtues. This plant grows as tall as a little tree, very beautiful, and expanded into many branches; the leaves are large, rather roundiſh, parted into five, eight, or more ſections, and ſometimes into nine ſharp-pointed or ſerrated diviſions, faſhioned like the leaves of a fig-tree, ſpread or open wide like the hand of a man, and has towards the top a bunch of flowers, cluſtering together ſomething like a bunch of grapes: theſe flowers are ſmall and ſtaminous, growing on the top of the ſtalk; but on the body of the plant grow bunches of rough triangular huſks, each containing three ſpeckled ſeeds, leſs than horſe-beans (though ſometimes as large); which, in their brittle ſhells, contain white kernels, of a ſweet, oily, and ſometimes nauſeous taſte. From theſe ſeeds are drawn, by expreſſion, an oil, vulgarly called, in America, caſtor oil. This oil has been given from two to four large ſpoonfuls, and found to act as a ſufficiently mild laxative: it is ſaid to be particularly uſeful in the dry-belly-ach, bilious, calculous, and nephritic complaints.

ROSA DAMASCENA: *Roſa purpurea C. B. Roſa centifolia Lin.* The damaſk roſe [*L. E.*]

This elegant flower is common in our gardens. Its ſmell is very pleaſant, and almoſt univerſally admired; its taſte bitteriſh and ſubacrid. In diſtillation with water, it yields a ſmall portion of a butyraceous oil, whoſe flavour exactly reſembles that of the roſes. This oil, and the diſtilled water, are very uſeful and agreeable cordials. Hoffman ſtrongly recommends them as of ſingular efficacy for raiſing the ſtrength, chearing and recruiting the ſpirits, and allaying pain; which they perform without raiſing any heat in the conſtitution, rather abating it when inordinate. Damaſk roſes, beſides their cordial aromatic virtue, which reſides in their volatile parts, have a mildly purgative one, which remains entire in the decoction left after the diſtillation. This, with a proper quantity of ſugar, forms an agreeable laxative ſyrup, which has long kept its place in the ſhops. The other officinal preparations of this flower, are, a ſolutive honey, and the diſtilled water; which latter is an ingredient in the muſk-julep, the confection of kermes, and ſaponaceous lotion, and is uſed alſo in making the ſimple ointment called pomatum [*L.*]

ROSA RUBRA: *Roſa Rubra multiplex C. B. Roſa gallica Lin.* The red roſe [*L. E*]

This has very little of the fragrance of the foregoing pale ſort; and, inſtead of its purgative quality, a mild, gratefully aſtringent one, eſpecially before the flower has opened. This is conſiderably improved by haſty exſiccation; but both the aſtringency and colour are impaired by ſlow drying. In the ſhops are prepared a conſerve, honey, tincture, troches [*L.*] vinegar and ſyrup [*E.*] of this flower. It is an ingredient alſo in the compound powder of ſcordium, the troches of Japan earth, mithridate, and theriaca [*L.*]

RORISMARINI *ſummitates, et flores anthos dicti: Roriſmarini hortenſis anguſtiore folio C. B. Roriſmarini officinalis Lin.* Roſemary; the tops and flowers [*E.*]

This is a native of Spain, Italy, and the ſouthern parts of France, where it grows in great abundance upon dry gravelly grounds; in the like ſoils, it thrives beſt with us, and likewiſe proves ſtronger in ſmell, than when produced in moiſt rich ones. This obſervation obtains in almoſt all the aromatic plants.

Roſemary has a fragrant ſmell, and a warm pungent bitteriſh taſte, approaching to thoſe of lavender. The leaves and tender tops are ſtrongeſt; next to theſe the cup of the flower; the flowers themſelves are conſiderably the weakeſt, but moſt pleaſant. Aqueous liquors extract great ſhare of the virtues of roſemary leaves by infuſion, and elevate them in diſtillation; along with the water ariſes a conſiderable quantity of eſſential oil, of an agreeable ſtrong penetrating ſmell. Pure ſpirit extracts in great perfection the whole aromatic flavour of the roſemary, and elevates very little of it in diſtillation; hence the reſinous maſs, left upon abſtracting the ſpirit, proves an elegant aromatic, very rich in the peculiar qualities of the plant. The flowers of roſemary give over great part of their flavour in diſtillation with pure ſpirit; by watery liquors, their fragrance is much injured; by beating, deſtroyed. The officinal preparations of roſemary are, an eſſential oil from the leaves [*L.*] or from the herb in flower [*E.*] a conſerve of the flowers [*L. E.*] and a ſpirit, called Hungary-water from the flowery tops [*L. E.*] The tops are uſed alſo in the compound ſpirit of lavender [*L. E.*] cordial confection [*L.*] and cephalic tincture [*E.*] and the eſſential oil in the cephalic balſam, ſaponaceous balſam, and nerve ointment [*E.*]

RUBIA TINCTORUM: *radix Rubiæ tinctorum ſativæ C. B.* Madder; the root [*L. E.*]

Madder is raiſed in ſome of our gardens for medicinal purpoſes: it was formerly cultivated among us, in quantity, for the uſe of the dyers, who are at preſent ſupplied from Holland and Zealand. It has little or no ſmell; a ſweetiſh taſte, mixed with a little bitterneſs. The virtues attributed to it, are thoſe of a detergent and aperient, whence it has been uſually ranked among the opening roots, and recommended in obſtructions of the viſcera, particularly of the kidneys, in coagulations of the blood from falls or bruiſes, in the jaundice, and beginning dropſies. It is an ingredient in the icteric decoction of the Edinburgh pharmacopœia.

It is obſervable, that this root,

taken internally, tinges the urine of a deep red colour; and in the Philoſophical Tranſactions, we have an account of its producing a like effect upon the bones of animals who had it mixed with their food. All the bones, particularly the more ſolid ones, were changed, both externally and internally, to a deep red, but neither the fleſhy or cartilaginous parts ſuffered any alteration: ſome of theſe bones macerated in water for many weeks together, and afterwards ſteeped and boiled in ſpirit of wine, loſt none of their colour, nor communicated any tinge to the liquors. This root appears therefore to be poſſeſſed of great ſubtility of parts, whence its medical virtues ſeem to deſerve inquiry.

RUBI IDÆI *fructus : Rubi idæi ſpinoſi C. B.* The raſpberry buſh; the fruit [*L.*]

This ſhrub is common in our gardens; and has likewiſe, in ſome parts of England, been found wild. It flowers in May, and ripens its fruit in July. Raſpberries have a pleaſant ſweet taſte, accompanied with a peculiarly grateful flavour; on account of which they are chiefly valued. As to their virtues, they moderately quench thirſt, abate heat, ſtrengthen the viſcera, and promote the natural excretions. An agreeable ſyrup, prepared from the juice, is directed to be kept in the ſhops.

RUBI VULGARIS *folia, fructus : Rubi vulgaris ſive rubi fructu nigro C. B.* The bramble, or blackberry buſh; its leaves and fruit.

The ſhrub is frequently found wild in woods and hedges. The berries have a faint taſte, without any thing of the agreeable flavour of raſpberries: the leaves are ſomewhat aſtringent.

RUSCI, *ſive Bruſci radix : Ruſci myrtifolii aculeati Tourn.* Butchers-broom, or knee-holly; the root [*E.*]

This is a ſmall prickly plant, ſometimes found wild in woods. The root has a ſoft ſweetiſh taſte, which is followed by a bitteriſh one. It is one of the five aperient roots; and in this intention is ſometimes made an ingredient in apozems and diet-drinks, for opening ſlight obſtructions of the viſcera, purifying the blood and juices, and promoting the fluid ſecretions.

RUTÆ *folia ſemen : Rutæ hortenſis latifoliæ C. B. Rutæ graveolentis Lin.* Broad-leaved rue; the leaves [*L. E.*] and ſeeds [*E.*]

This is a ſmall ſhrubby plant, met with in gardens, where it flowers in June, and holds its green leaves all the winter. We frequently find in the markets a narrow-leaved ſort, which is cultivated by ſome in preference to the other, becauſe its leaves appear variegated during the winter, with white ſtreaks.

Rue has a ſtrong, ungrateful ſmell, and a bitteriſh, penetrating taſte. The leaves, when in full vigour, are extremely acrid, inſomuch as to inflame and bliſter the ſkin, if much handled. With regard to their medicinal virtues, they are powerfully ſtimulating, attenuating and detergent; and hence, in cold phlegmatic habits, they quicken the circulation, diſſolve tenacious juices, open obſtructions of the excretory glands, and promote the fluid ſecretions. The writers on the materia medica in general, have entertained a very high opinion of the virtues of this plant. Boerhaave is full of its praiſes, particularly of the eſſential oil, and the diſtilled water cohobated or re-diſtilled ſeveral times from freſh parcels of the herb. After ſomewhat extravagantly commending other waters prepared in this manner, he adds, with regard to that of rue, that the greateſt commendations he can beſtow upon it, fall ſhort of its merit: "What medicine (ſays he) can be more efficacious for promoting ſweat and perſpiration, for the cure of the hyſteric paſſion, and of epilepſies, and for expelling poiſon?" Whatever ſervice rue may be of in the two laſt caſes, it undoubtedly has its uſe in the others: the cohobated water, however, is not the moſt efficacious preparation of it. (See Part iii. chap. v.) An extract made by rectified ſpirit, contains, in a ſmall compaſs, the whole virtues of the rue; this menſtruum taking up by infuſion all the pungency and flavour of the plant, and elevating nothing in diſtillation. With water, its peculiar flavour and warmth ariſe; the bitterneſs, and a conſiderable ſhare of the pungency remaining behind.

A watery extract [*E.*] eſſential oil [*L. E.*] and conſerve [*L.*] of rue are kept in the ſhops. This herb is uſed alſo as an ingredient in the electary of bayberries, compound powder of myrrh, and the green oil [*L.*]

SABINÆ *folia ſeu ſummitates: Sabinæ folio tamariſci Dioſcoridis C. B. Juniperi Sabinæ Lin.* Savin; the leaves or tops [*L. E.*]

This is an evergreen ſhrub, clothed with ſmall, ſomewhat prickly leaves. It does not produce fruit till very old, and hence has been generally reputed barren. The leaves have a bitter, acrid, biting taſte; and a ſtrong diſagreeable ſmell: diſtilled with water, they yield an eſſential oil, in larger quantity (as Hoffman obſerves) than any other known vegetable, the turpentine-tree alone excepted.

Savin is a warm irritating aperient medicine, capable of promoting ſweat, urine, and all the glandular ſecretions. The diſtilled oil is one of the moſt powerful emmenagogues; and is found of good ſervice in obſtructions of the uterus, or other viſcera, proceeding from a laxity and weakneſs of the veſſels, or a cold ſluggiſh indiſpoſition of the juices.

The eſſential oil [*L. E.*] and a watery extract [*L.*] of ſavin are kept in the ſhops: the leaves themſelves are an ingredient in the compound valerian water [*E.*] the extract in the compound elixir of myrrh [*L.*] and the eſſential oil in the troches of myrrh [*E.*]

SACCHARUM ALBUM. White or refined ſugar [*E.*]

SACCHARUM PURISSIMUM. Double refined ſugar [*L.*]

SACCHARUM RUBRUM. Brown or unrefined ſugar [*L: E.*]

SACCHARUM CANDUM. Sugar-candy [*E.*]

Sugar is the eſſential ſalt of the *arundo ſaccharifera*, a beautiful large cane growing ſpontaneouſly in the Eaſt Indies, and ſome of the warmer parts of the Weſt, and cultivated in great quantity in our American plantations. The expreſſed juice of the cane is clarified with the addition of lime water (without which it does not aſſume the form of a true ſugar) and boiled down to a due conſiſtence; when, being removed from the fire, the ſaccharine part concretes from the groſſer unctuous matter, called treacle, or melaſſes. This, as yet impure or brown ſugar, is farther purified, in conical moulds, by ſpreading moiſt clay on the upper broad ſurface: the watery moiſture, ſlowly percolating through the maſs, carries with it conſiderable part of the remains of the treacly matter. This clayed ſugar, imported from America, is by our refiners diſſolved in water, the ſolution clarified by boiling with whites of eggs and deſpumation, and after due evaporation poured into moulds: as ſoon as the ſugar has concreted, and the fluid part drained off, the ſurface is covered with moiſt clay as before. The ſugar, thus once refined, by a repetition of the proceſs, becomes the double-refined ſugar of the ſhops. The candy, or cryſtals, are prepared by boiling down ſolutions of ſugar to a certain pitch, and then removing them into a hot room; with ſticks ſet acroſs the veſſel for the ſugar to ſhoot upon. Theſe cryſtals prove of a white or brown colour, according as the ſugar was pure or impure.

The uſes of ſugar as a ſweet, are ſufficiently well known. The impure ſorts contain an unctuous, or oily matter, in conſequence of which they prove emollient and laxative. The cryſtals are moſt difficult of ſolution, and hence are propereſt where this ſoft lubricating ſweet is wanted to diſſolve ſlowly in the mouth.

SAGAPENUM [*L. E.*] a concrete juice brought from Alexandria, either in diſtinct tears, or run together in large maſſes. It is outwardly of a yellowiſh colour, internally ſomewhat paler, and clear like horn, grows ſoft upon being handled, and ſticks to the fingers; its taſte is hot and biting; the ſmell diſagreeable, by ſome reſembled to that of a leek, by others to a mixture of aſafetida and galbanum.

Sagapenum is an uſeful aperient and deobſtruent; and frequently preſcribed either alone, or in conjunction with ammoniacum, or galbanum, for opening obſtructions of the viſcera, and in hyſterical diſorders ariſing from a deficiency of the menſtrual purgations. It likewiſe deterges the pulmonary veſſels, and proves of conſiderable ſervice in ſome kinds of aſthmas, where the lungs are oppreſſed by viſcid phlegm. It is moſt commodiouſly given in the form of pills. From two or three grains to half a dram, may be given every night or oftner, and continued for ſome time. When ſagapenum is ſcarce, the druggiſts uſually ſupply its place with the larger and darker coloured maſſes of bdellium, broken into pieces; which are not eaſily diſtinguiſhed from it.

Sagapenum is an ingredient in the compound powder of myrrh, gum-pills, electary of bay-berries, mithridate and theriaca of the London pharmacopœia. The college of Edinburgh has no where employed either this gum or opoponax, giving the preference to ammoniacum and galbanum.

SAGO [*E.*] This is the produce of an oriental tree, called by C. Bauhine *palmam referens arbor farinifera.* The medullary part of the tree is beaten with water, and made into cakes, which are uſed by the Indians as bread: theſe reduced into granules, and dried, are the ſago brought to us. It is moderately nutritious, though not perhaps ſuperior to our own grain.

SAL AMMONIACUS. Sal ammoniac [*L. E.*]

This is an artificial ſaline concrete, ſaid to be prepared by ſublimation from the ſoot of cow dung. It is brought to us from Egypt, in large round cakes, convex on one ſide, and concave on the other; and ſometimes in conical loaves. On breaking, they appear compoſed of needles, or ſtriæ, running tranſverſely. The beſt are almoſt tranſparent, colourleſs, and free from any viſible impurities: thoſe moſt commonly met with are of a grey yellowiſh colour on the outſide, and ſometimes black, according as the matter is more or leſs impure. The taſte of this ſalt is very ſharp and penetrating. It diſſolves in twice its weight, or a little leſs, of water: and upon evaporating a part of the menſtruum, concretes again into long ſhining ſpicula, or thin fibrous plates, like feathers.

Sal ammoniac appears from experiments to be compoſed of marine acid united with a volatile alkali. If mingled with fixt ſalts, or abſorbent earths, and expoſed to a moderate fire, a large quantity of pure volatile ſalt ſublimes, the acid remaining united with the intermedium; if treated in the ſame manner with quicklime, an exceeding penetrating volatile ſpirit ariſes, but no ſolid ſalt is obtained. Expoſed alone to a conſiderable heat, it ſublimes entire, without any alteration of its former properties: ground with certain metallic ſubſtances, it elevates ſome part of them along with itſelf, and concretes with the remainder into a maſs, which readily flows into a liquor in a moiſt air. This appears in moſt reſpects ſimilar to a ſaturated ſolution of the metal made directly in ſpirit of ſalt.

Pure ſal ammoniac is a perfectly neutral ſalt, capable of attenuating viſcid humours, and promoting a diaphoreſis, or the urinary diſcharge, according to certain circumſtances in the conſtitution, or as the patient is managed during the operation. If a dram of the ſalt be taken, diſſolved in water, and the patient kept warm, it generally proves ſudorific; by moderate exerciſe, or walking in the open air, its action is determined to the kidneys; a large doſe gently looſens the belly, and a ſtill larger proves emetic. This ſalt is recommended by many as an excellent febrifuge, and by ſome has been held a great ſecret in the cure of intermittents. It is undoubtedly a powerful aperient, and ſeems to paſs into the minuteſt veſſels; and, as ſuch, may in ſome caſes be of ſervice, either alone, or joined with bitters, or the bark, where the latter would by itſelf produce dangerous obſtructions, or aggravate thoſe already formed. This ſalt is ſometimes employed externally as an antiſeptic, and in lotions and fomentations, for œdematous tumours: as alſo in gargariſms for inflammations of the tonſils. and for attenuating and diſſolving thick viſcid mucus. It is an ingredient in the diſcutient cataplaſm of the Edinburgh pharmacopœia.

SAL CATHARTICUS AMARUS [*L. E.*] The bitter purging ſalt; extracted from the bitter liquor remaining after the cryſtallization of common ſalt from ſea water. It was firſt prepared as a cheap ſubſtitute to the ſalt of the Epſom, and other purging mineral waters, from which it does not conſiderably differ, either in ſenſible qualities, or medical effects. We uſually meet with it in minute cryſtals, of a ſnowy appearance; diſſolved in water, and cryſtallized afreſh, it concretes, if properly managed, into larger ones, of a rectangular priſmatic figure, reſembling thoſe of the artificial cathartic ſalt of Glauber, for which they are ſometimes ſubſtituted in the ſhops.

All theſe ſalts have a penetrating bitteriſh taſte: they diſſolve in leſs than an equal weight of water: in a moderate heat, they melt, bubble up into bliſters, and ſoon change into a white ſpongy maſs, with the loſs of above half their weight: this calx taſtes bitterer than the ſalts did at firſt, and almoſt totally diſſolves again in water. The acid of theſe ſalts is chiefly the vitriolic: the baſis of the natural is a fine abſorbent earth; of the artificial, an alkaline ſalt, the ſame with the baſis of ſea ſalt. Hence, upon adding alkaline ſalts to a ſolution of the ſalts of Glauber, no change enſues: whilſt the ſalts obtained from the purging waters, or the bittern of marine waters, grow milky upon this addition, and depoſit their earth, the alkaline ſalt being taken up in its place.

The ſal catharticus is a mild and gentle purgative, operating with ſufficient efficacy, and in general with eaſe and ſafety, rarely occaſioning any gripes, ſickneſs, or the other inconveniencies with which purgatives of the reſinous kind are too often accompanied. Six or eight drams may be diſſolved for a doſe in a proper quantity of common water; or four, five, or more, in a pint, or quart of the purging waters. Theſe liquors may likewiſe be ſo managed as to promote evacuation, by the other emunctories. If the patient be kept warm, they increaſe perſpiration; by moderate exerciſe in a cool air, the urinary diſcharge.

SAL COMMUNE. Common, or alimentary ſalt. This is a neutral ſalt, differing from moſt others in occaſioning drought when ſwallowed. It diſſolves in ſomewhat leſs than three times its weight of water; the ſolution ſlowly evaporated, and ſet to ſhoot, affords cubical cryſtals, which unite together into the form of hollow truncated pyramids. Expoſed to the fire, it crackles and flies about, or decrepitates, as it is called; ſoon after it melts, and appears fluid as water. A ſmall quantity of this ſalt, added to the nitrous acid, enables it to diſſolve gold, but renders it unfit for diſſolving ſilver. If a ſolution of ſilver be poured into liquors, containing even a minute portion of common ſalt, the whole immediately grows turbid and white; this phænomenon is owing to the precipitation of the ſilver.

This ſalt is either found in a ſolid form in the bowels of the earth, or diſſolved in the waters of the ſea or ſaline ſprings.

1. *Sal gemmæ* [*L. E.*] Rock ſalt. This is met with in ſeveral parts of the world, but in the greateſt plenty in certain deep mines, of prodigious extent, near Cracow in Poland; ſome is likewiſe found in England, particularly in Cheſhire. It is for the moſt part very hard, ſometimes of an opake ſnowy whiteneſs, ſometimes of red, green, blue, and other colours. When pure, it is perfectly tranſparent and colourleſs; the other ſorts are purified by ſolution in water and cryſtallization, in order to fit them for the common uſes of ſalt.

2. *Sal marinus* [*L. E.*] The ſalt extracted from ſea water and ſaline ſprings. Sea waters yield from one fiftieth to one-thirtieth their weight of pure ſalt. Several ſprings afford much larger quantities; the celebrated ones of our own country at Nantwich, Northwich, and Droitwich, yield (according to Dr. Brownrigg) from one-ſixth to ſomewhat more than one-third. There are two methods of obtaining the common ſalt from theſe natural ſolutions of it: the one, a haſty evaporation of the aqueous fluid till the ſalt begins to concrete, and fall in grains to the bottom of the evaporating pan, whence it is raked out, and ſet in proper veſſels to drain from the brine or bittern: the

other, a more ſlow and gradual evaporation, continued no longer than till a ſaline cruſt forms on the top of the liquor, which, upon removing the fire, ſoon begins to ſhoot, and run into cryſtals of a cubical figure. In the warmer climates, both theſe proceſſes are effected by the heat of the ſun. The ſalts obtained by them differ very conſiderably: that got by a haſty evaporation is very apt to relent in a moiſt air, and run per deliquium; an inconvenience to which the cryſtallized ſalt is not ſubject: this latter is likewiſe found better for the preſerving of meat, and for ſundry other purpoſes.

Common ſalt, in ſmall quantities, is ſuppoſed to be warming, drying, and to promote appetite and digeſtion. In large doſes, as half an ounce, it proves cathartic. It is ſometimes uſed to check the operation of emetics, and make them run off by ſtool; and as a ſtimulus in glyſters.

* SALIX *P. E. Salix vulgaris alba arboreſcens C. B. Salix fragilis Lin.* Common White Willow: a pretty large tree, frequent in woods and moiſt places; it differs from the other willows, in the oblong pointed ſerrated leaves being hoary on both ſides, though moſt ſo on the lower, and in the branches being brittle.

The bark of this tree has lately been found an uſeful medicine in agues, of which many perſons have been cured by taking a dram of the powdered bark every four hours during the intermiſſions; though in ſome caſes it was neceſſary to join to it a little Peruvian bark (ſee the Philoſophical Tranſactions for the year 1763). To the taſte, this bark diſcovers a pretty ſtrong bitterneſs and aſtringency: with ſolution of chalybeate vitriol, it ſtrikes an inky blackneſs.

SALVIÆ *folia: Salviæ majoris C. B.* Common ſage (the green and red ſorts); the leaves [*L. E.*]

SALVIÆ *hortenſis minoris folia, ſummitates: Salviæ minoris auritæ et non auritæ C. B.* Small ſage or ſage of virtue; the leaves and tops [*E.*]

Theſe plants are common in our gardens, and flower in May and June: the green and red common ſages differ no otherwiſe than in the colour of the leaves; the ſeeds of one and the ſame plant produce both: the ſmall ſort is a diſtinct ſpecies; its leaves are narrower than the others, generally of a whitiſh colour, and never red; moſt of them have at the bottom a piece ſtanding out on each ſide in the form of ears. Both ſorts are moderately warm aromatics, accompanied with a light degree of aſtringency and bitterneſs; the ſmall ſort is the ſtrongeſt, the large moſt agreeable.

The writers on the materia medica are full of the virtues of ſage, and derive its name from its ſuppoſed ſalutary qualities, *(Salvia ſalvatrix, naturæ conciliatrix—Cur moriatur homo, cui ſalvia creſcit in horto,* &c.) Its real effects are, to moderately warm and ſtrengthen the veſſels; and hence, in cold phlegmatic habits, it excites appetite, and proves ſerviceable in debilities of the nervous ſyſtem. The beſt preparation for theſe purpoſes is an infuſion of the dry leaves, drunk as tea; or a tincture, or extract, made with rectified ſpirit, taken in proper doſes; theſe contain the whole virtues of the ſage; the diſtilled water and eſſential oil, only its warmth and aromatic quality, without any thing of its roughneſs or bitteriſhneſs. Aqueous infuſions of the leaves, with the addition of a little lemon juice, prove an uſeful diluting drink in febrile diſorders, of an elegant colour, and ſufficiently acceptable to the palate.

SALVIÆ SYLVESTRIS *folia: Scorodotidis ſive ſcordii foliis ſalviæ J. B.* Wood ſage; the leaves.

This grows wild in woods and hedges. In ſmell, taſte, and medical virtues, it comes nearer to ſcordium than ſage: it is leſs diſagreeable than the former, but more ſo than the latter.

SAMBUCI *folia, flores, baccæ, cortex: Sambuci fructu in umbella nigro C. B. Sambuci nigræ Lin.* Common black-berried elder; the leaves, bark [*E.*] flowers, and berries [*L. E.*]

This is a large ſhrub, frequent in hedges. It flowers in May, and ripens in September. The inner green bark of its trunk is gently cathartic; an infuſion of it in wine, or the expreſſed juice, in the doſe of half an ounce, or an ounce, is ſaid to purge moderately, and in ſmall doſes to prove an efficacious deobſtruent, capable of promoting all the fluid ſecretions. The young buds, or rudiments of the leaves, are ſtrongly purgative, and act with ſo much violence as to be deſervedly accounted unſafe. The flowers are very different in quality: theſe have an agreeable aromatic flavour, which they give over in diſtillation with water, and impart by infuſion, to vinous and ſpirituous liquors. The berries have a ſweetiſh, not unpleaſant taſte: nevertheleſs, eaten in ſubſtance, they offend the ſtomach: the expreſſed juice, inſpiſſated to the conſiſtence of a rob, proves an uſeful aperient medicine; it opens obſtructions of the viſcera, promotes the natural evacuations, and if continued for a length of time, does conſiderable ſervice in ſundry chronical diſorders. It is obſervable, that this juice (which in its natural ſtate is of a purpliſh colour) tinges vinous ſpirits of a deep red.

A rob prepared from the berries [*L. E.*] is uſed for making up the theriaca Edinenſis and pectoral electary [*E.*] with the intention of which it excellently coincides. The flowers are an ingredient in the alexiterial and plague waters, the common decoction for glyſters and fomentations, and the diſcutient cataplaſm [*E.*] An oil of elder is prepared by boiling the flowers in oil olive [*L.*]; and an ointment, by boiling them in a mixture of oil and ſuet [*L.*] An ointment is made alſo from the leaves and bark [*E.*]

SAMPSUCHUS, vide MAJORANA.

SANDARACHA, a foſſil compoſed of arſenic and ſulphur. Vide ARSENICUM.

SANGUIS DRACONIS [*L. E.*] Dragons blood, a reſin brought from the Eaſt-Indies, either in oval drops, wrapped up in flag leaves, or in large maſſes, compoſed of ſmaller tears. The writers on the materia medica in general give the preference to the former, though the latter is not unfrequently of equal goodneſs; the fine dragons blood of either ſort breaks ſmooth, free from any viſible impurities, of a dark red colour, which changes, upon being powdered, into an elegant bright crimſon. Several artificial compoſitions, coloured with the true dragons blood, or Brazil wood, are ſometimes ſold in the room of this commodity: ſome of theſe diſſolve, like gums, in water; others crackle in the fire, without proving inflammable; whilſt the genuine ſanguis draconis readily melts and catches flame, and is not acted on by watery liquors. It totally diſſolves in pure ſpirit, and tinges a large quantity of the menſtruum of a deep red colour: it is likewiſe ſoluble in expreſſed oils, and gives them a red hue, leſs beautiful than that communicated by anchuſa. This drug, in ſubſtance, has no ſenſible ſmell or taſte; when diſſolved, it diſcovers ſome degree of warmth and pungency. It is uſually looked upon as a gentle aſtringent, and ſometimes directed as ſuch in extemporaneous preſcription, againſt ſeminal gleets, the fluor albus, and other fluxes: in theſe caſes, it produces the general effects of reſinous bodies, lightly incraſſating the fluids, and ſomewhat ſtrengthening the ſolids. It is an ingredient in the ſtyptic powder [*L. E.*] Locatelli's balſam [*E.*] and ſtrengthening plaſter [*L.*]

SANTALUM ALBUM. White ſaunders; a wood brought from the Eaſt-Indies, in billets, about the thickneſs of a man's leg, of a pale whitiſh colour. Greateſt part of it, as met with in the ſhops, has no ſmell or taſte, or any ſenſible quality that can recommend it to the notice of the phyſician.

SANTALUM CITRINUM [*E.*] Yellow ſaunders: a pale yellowiſh wood brought from the Eaſt Indies; of a pleaſant ſmell, and a bitteriſh aromatic taſte, accompanied with an agreeable kind of pungency. This elegant wood might undoubtedly be applied to valuable medical purpoſes, though at preſent very rarely made uſe of. It is ſcarcely ever directed in extemporaneous preſcription, and the only officinal compoſition in which it is an ingredient, is the *confectio alkermes* of the Edinburgh pharmacopœia. The London college have omitted it in their catalogue of ſimples. Diſtilled with water, it yields a fragrant eſſential oil, which thickens, in the cold, into the conſiſtence of a balſam. Digeſted in pure ſpirit, it imparts a rich yellow tincture; which being committed to diſtillation, the ſpirit ariſes, without bringing over any thing conſiderable of the flavour of the ſaunders. The reſiduum contains the virtue of ſix times its weight of the wood. Hoffman looks upon this extract as a medicine of ſimilar virtues to ambergris; and recommends it as an excellent reſtorative in great debilities.

SANTALUM RUBRUM [*L. E.*] *Pterocarpus Santolinus Lin.* Red ſaunders; a wood brought from the Eaſt Indies, in large billets, of a compact texture, a dull red, almoſt blackiſh colour on the outſide, and a deep brighter red within. This wood has no manifeſt ſmell, and little or no taſte. It has been commended as a mild aſtringent, and a corroborant of the nervous ſyſtem; but theſe are qualities that belong only to the yellow ſort.

The principal uſe of red ſaunders is as a colouring drug; in which intention it is employed in the *balſamum Locatelli* [*L.*] and *ſpiritus lavendulæ compoſitus* [*L. E.*] It communicates a deep red to rectified ſpirit, but gives no tinge to aqueous liquors: a ſmall quantity of the reſin, extracted by means of ſpirit, tinges a large one of freſh ſpirit, of an elegant blood red. There is ſcarce any oil, that of lavender excepted, to which it communicates its colour. Geoffroy, and others, take notice, that the

Brazil woods are ſometimes ſubſtituted for red ſaunders; and the college of Bruſſels are in doubt whether all that is ſold among them for ſaunders, be not really a wood of that kind. According to the account which they have given, their ſaunders is certainly the Brazil wood; the diſtinguiſhing character of which is, that it imparts its colour to common water.

SANTONICUM [*E*] Wormſeed; the produce of a plant of the wormwood or mugwort kind, growing in the Levant.

It is a ſmall, light, chaffy ſeed, compoſed as it were of a number of thin membranous coats, of a yellowiſh colour, an unpleaſant ſmell, and a very bitter taſte. Theſe ſeeds are celebrated for anthelmintic virtues (which they have in common with other bitters) and are ſometimes taken in this intention, either along with melaſſes, or candied with ſugar: their unpleaſant taſte renders the form of a powder or decoction inconvenient. They are not very often met with genuine in the ſhops.

SAPO DURUS [*L.*]: *Sapo albus Hiſpanicus* [*E.*] White Spaniſh ſoap.

SAPO MOLLIS [*L.*] Common ſoft ſoap.

SAPO NIGER, *ſeu Melanoſmegma* [*E.*] Black ſoft ſoap.

Soap is compoſed of expreſſed vegetable oils, or animal fats, united with alkaline lixivia. The firſt ſort, or white hard ſoap, is made with the finer kinds of oil olive; the common ſoft ſort, with coarſer oils, fat, tallow, or a mixture of all theſe; and the black (as is ſaid) with train oil.

The purer hard ſoap is the only ſort intended for internal uſe. This, triturated with oily, or reſinous matters, renders them ſoluble in water, and hence becomes an uſeful ingredient in pills compoſed of reſins, promoting their diſſolution in the ſtomach, and union with the animal fluids. Boerhaave was a great admirer of ſoap; and in his private practice ſeldom preſcribed any reſinous pills without it; unleſs where an alkaleſcent, or putrid ſtate of the juices forbade its uſe. From the ſame quality, ſoap likewiſe ſeems well fitted for diſſolving ſuch oily or unctuous matters, as it may meet with in the body, attenuating viſcid juices, opening obſtructions of the viſcera, and deterging all the veſſels it paſſes through. It is likewiſe a powerful menſtruum for the human calculus: a ſolution of it in lime water is one of the ſtrongeſt diſſolvents that can be taken with ſafety into the ſtomach; the virtue of this compoſition is conſiderably greater than the aggregate of the diſſolving powers of the ſoap and lime water when unmixed. See the *Edinburgh medical eſſays*.

The ſoft ſoaps are more penetrating and acrimonious than the hard. The only medical uſe of theſe is for ſome external purpoſes.

Hard ſoap gives name to an officinal plaſter [*L. E.*] liniment [*L.*] and balſam [*E.*]; it is joined to opium, to render it more readily ſoluble in the ſtomach, in the *pilulæ ſaponaceæ* [*L.*] and to aloes in the *pilulæ aloeticæ* [*E.*] Soft ſoap is an ingredient in the milder common cauſtic [*L.*] and black ſoap in the anodyne plaſter [*E.*]

SAPONARIÆ *folia radix*: *Saponariæ majoris lævis C. B. Sa-*

ponariæ officinalis Lin. Soapwort, or bruiſewort; the herb and root [*E.*]

This grows wild, though not very common, in low wet places, and by the ſides of running waters; a double-flowered ſort is frequent in our gardens. The leaves have a bitter, not agreeable taſte; agitated with water, they raiſe a ſaponaceous froth, which is ſaid to have nearly the ſame effects with ſolutions of ſoap itſelf in taking out ſpots from cloths, and the like. The roots taſte ſweetiſh and ſomewhat pungent; and have a light ſmell like thoſe of liquorice: digeſted in rectified ſpirit they yield a ſtrong tincture, which loſes nothing of its taſte or flavour in being inſpiſſated to the conſiſtency of an extract. This elegant root has not come much into practice among us, though it promiſes, from its ſenſible qualities, to be a medicine of conſiderable utility. It is greatly eſteemed by the German phyſicians as an aperient, corroborant, and ſudorific; and preferred by the college of Wirtemberg, Stahl, Neumann, and others, to ſarſaparilla.

SARCOCOLLA [*L. E.*] a concrete juice, brought from Perſia, and Arabia, in ſmall, whitiſh, yellow grains, with a few of a reddiſh, and ſometimes of a deep red colour, mixed with them; the whiteſt tears are preferred, as being the freſheſt. Its taſte is bitter, accompanied with a dull kind of ſweetneſs. This drug diſſolves in watery liquors, and appears to be chiefly of the gummy kind, with a ſmall mixture of reſinous matter. It is principally celebrated for conglutinating wounds and ulcers (whence its name σαρκόκολλα fleſh glue), a quality, to which neither this, nor any other drug, has a juſt title. It is an ingredient in the *pulvis e ceruſſa compoſitus* [*L.*]

SARSAPARILLA [*L. E.*]: *Smilax Sarſaparilla Lin.* a root brought from the Spaniſh Weſt Indies. It conſiſts of a great number of long ſtrings hanging from one head. The long roots (the only part made uſe of) are about the thickneſs of a gooſe quill, or thicker, flexible, compoſed of fibres running their whole length, ſo that they might be ſtript into pieces from one end to the other. They have a glutinous, bitteriſh, not ungrateful taſte; and no ſmell. This root was firſt brought into Europe by the Spaniards, about the year 1563, with the character of a ſpecific for the cure of the lues venerea, which made its appearance a little before that time, and likewiſe of ſeveral obſtinate chronic diſorders. Whatever good effects it might have produced in the warmer climates, it proved unſucceſsful in this; inſomuch that many have denied it to have any virtue at all. It appears however from experience, that though greatly unequal to the character which it bore at firſt, it is in ſome caſes of conſiderable uſe as a ſudorific, where more acrid medicines are improper. The beſt preparations are a decoction and extract made with water; a decoction of half an ounce of the root, or a dram of the extract, which is equivalent thereto, may be taken for a doſe.

SASSAFRAS [*L. E.*]: the root of a large American tree *(arbor ex Florida ficulneo folio C. B.) Laurus (ſaſſafras) Lin.* brought to us in long ſtraight pieces, very light, and of a ſpongy texture, covered with a rough fungous bark; outwardly of an aſh colour, inwardly of the colour of ruſty iron. It has a fragrant ſmell, and a ſweetiſh, aromatic, ſubacrid taſte: the bark taſtes much ſtronger than any other part; and the ſmall twigs ſtronger than the large pieces. As to the virtues of this root, it is a warm aperient and corroborant; and frequently employed, with good ſucceſs, for purifying and ſweetening the blood and juices. For theſe purpoſes, infuſions made from the raſped root or bark, may be drunk as tea. In ſome conſtitutions, theſe liquors, by their fragrance, are apt, on firſt taking them, to affect the head: in ſuch caſes they may be advantageouſly freed from their flavour by boiling; a decoction of ſaſſafras, boiled down to the conſiſtence of an extract, proves ſimply bitteriſh and ſubaſtringent. Hoffman aſſures us, that he has frequently given this extract to the quantity of a ſcruple at a time with remarkable ſucceſs, for ſtrengthening the tone of the viſcera in cachexies; as alſo in the decline of intermittent fevers, and in hypochondriacal ſpaſms. Saſſafras yields in diſtillation an extremely fragrant oil, of a penetrating pungent taſte; ſo ponderous (notwithſtanding the lightneſs of the drug itſelf) as to ſink in water. Rectified ſpirit extracts the whole taſte and ſmell of ſaſſafras: and elevates nothing in evaporation; hence the ſpirituous extract proves the moſt elegant and efficacious preparation, as containing the virtue of the root entire.

The only officinal preparation of ſaſſafras is the eſſential oil [*L. E.*] The ſaſſafras itſelf is an ingredient in the decoction of the woods [*E.*] and the compound lime waters [*L. E.*] and the oil in the elixir guaiacinum [*E.*]

SATUREIÆ *folia: Satureiæ hortenſis, ſive cunilæ ſativæ Plinii C. B.* Summer ſavoury; the leaves [*E.*]

This herb is raiſed annually in gardens for culinary purpoſes. It is a very pungent warm aromatic; and affords, in diſtillation with water, a ſubtile eſſential oil, of a penetrating ſmell, and very hot, acrid taſte. It yields little of its virtues by infuſion to aqueous liquors: rectified ſpirit extracts the whole of its taſte and ſmell, and elevates nothing in diſtillation.

SATYRII MARIS *radix: Orchidis morionis maris foliis maculatis C. B. Orchis maſculæ Lin.* Orchis; the root [*E.*]

This plant is frequent in ſhady places and moiſt meadows: each plant has two oval roots, of a whitiſh colour, a viſcid ſweetiſh taſte, and a faint unpleaſant ſmell. They abound with a glutinous ſlimy juice. With regard to their virtues, like other mucilaginous vegetables, they thicken the thin ſerous humours and defend the ſolids from their acrimony: they have alſo been celebrated, though on no very good foundation, for analeptic and aphrodiſiac virtues: and frequently made uſe of in theſe intentions. In the Edinburgh pharmacopœia, the root is directed to be candied.

SALEP [*E.*] a celebrated reſtorative among the Turks, is probably the prepared root of certain plants of the orchis kind. This drug, as ſometimes brought to us, is in oval pieces, of a yellowiſh white colour, ſomewhat clear and pellucid, very hard, and almoſt horny, of little or no ſmell, and taſting like gum tragacanth. Satyrion root, boiled in water, freed from the ſkin, and afterwards ſuſpended in the air to dry, gains exactly the ſame appearance; the roots thus prepared, diſſolve in boiling water into a mucilage. Geoffroy, who firſt communicated this preparation of orchis, recommends it in conſumptions, in bilious dyſenteries, and diſorders of the breaſt proceeding from an acrimony of the juices.

SAXIFRAGÆ ALBÆ *folia, radix: Saxifragæ albæ radice granuloſa J. B. Saxifragæ granulatæ Lin.* White-flowered ſaxifrage; the leaves, and the roots [*E.*] which latter are improperly called (from their conſiſting of little grains) ſeeds.

SAXIFRAGÆ VULGARIS *folia ſemen: Seſelis pratenſis noſtratis Raii. Pucedani Silaci Lin.* Meadow ſaxifrage; the leaves and ſeeds.

Theſe herbs grow wild, the firſt in dry ſandy grounds, the ſecond in fields and meadows. The firſt is not very common, and hence its leaves and roots have been generally ſupplied by the leaves and ſeeds of the ſecond. Neither of them is at preſent in much eſteem, notwithſtanding the aperient, diuretic and lithontriptic virtues formerly attributed to them.

SCAMMONIUM [*L. E.*] Scammony; a concrete juice extracted from the roots of a large climbing plant growing in the Aſiatic Turkey. *Convolvulus (ſcammoniæ) Lin.* The beſt comes from Aleppo, in light, ſpungy maſſes, eaſily friable, of a ſhining aſh colour verging to black; when powdered, of a light grey or whitiſh colour: an inferior ſort is brought from Smyrna, in more compact, ponderous pieces, of a darker colour, and full of ſand and other impurities. This juice is chiefly of the reſinous kind: rectified ſpirit diſſolves five ounces out of ſix, the remainder is a mucilaginous ſubſtance mixed with droſs: proof ſpirit totally diſſolves it, the impuririties only being left. It has a faint unpleaſant ſmell; and a bitteriſh ſomewhat acrimonious taſte.

Scammony is an efficacious and ſtrong purgative. Some have condemned it as unſafe, and laid many ill qualities to its charge; the principal of which is, that its operation is uncertain, a full doſe proving ſometimes ineffectual, whilſt at other times a much ſmaller one occaſions dangerous hypercatharſes. This difference however is owing entirely to the different circumſtances of the patient, and not to any ill quality, or irregularity of operation in the medicine. Where the inteſtines are lined with an exceſſive load of mucus, the ſcammony paſſes through, without exerting itſelf upon them; where the natural mucus is deficient, a ſmall doſe of this or any other reſinous cathartic, irritates and inflames. Many have endeavoured to abate the force of this drug, and correct its imaginary virulence, by expoſing it to the fume of ſulphur, diſſolving it in acid juices, and the like: but this could do no more than deſtroy as it were a part of the medicine, without making any alteration in the reſt. Scammony in ſubſtance, judiciouſly managed, ſtands not in need of any corrector: if triturated with ſugar or with almonds, as we have formerly recommended for other reſinous purgatives, it becomes ſufficiently ſafe and mild in operation. It may likewiſe be conveniently diſſolved, by trituration, in a ſtrong decoction of liquorice, and then poured off from the feces. The college of Wirtemberg aſſures us, that by this treatment it becomes mildly purgative, without being attended with gripes, or other inconveniencies; and that it likewiſe proves inoffenſive to the palate. The common doſe of ſcammony is from three to twelve grains.

Scammony gives name to an officinal compound powder and electary [*L.*] and is an ingredient in the compound powder of ſena, the cathartic extract, the coloquintida pills, mercurial pills [*L.*] and purgative deobſtruent pills [*E.*]

SCHŒNANTHUS, vide JUNCUS ODORATUS.

SCILLÆ *radix: Scillæ radice alba C. B. vel Scillæ vulgaris radice rubra C. B. Scillæ maritimæ Lin.* The ſquill, or ſea-onion; its root [*E.*]

This is a ſort of onion, growing ſpontaneouſly upon dry ſandy ſhores in Spain and the Levant, whence the root is annually brought into Europe. It ſhould be choſen plump, ſound, freſh, and full of a clammy juice; ſome have preferred the red ſort, others the white, though neither deſerves the preference to the other; the only difference perceivable betwixt them, is that of the colour; and hence the college allow both to be uſed promiſcuouſly. This root is to the taſte very nauſeous, intenſely bitter and acrimonious: much handled, it exulcerates the ſkin. With regard to its medical virtues, it powerfully ſtimulates the ſolids, and attenuates viſcid juices, and by theſe qualities, promotes expectoration, urine, and (if the patient be kept warm) ſweat. If the doſe be conſiderable, it proves emetic, and ſometimes purgative. The principal uſe of this medicine is where the primæ viæ abound with mucous matter, and the lungs are oppreſſed by tenacious phlegm. Dr. Wagner (in his clinical obſervations) recommends it given along with nitre, in hydropical ſwellings, and in the nephritis: and mentions ſeveral cures which he performed, by giving from four to ten grains of the powder for a doſe, mixed with a double quantity of nitre. He ſays, that thus managed, it almoſt always operates as a diuretic, though ſometimes it vomits or purges. The moſt commodious form for the taking of ſquills, unleſs when deſigned as an emetic, is that of a bolus or pill: liquid forms are to moſt people too offenſive, tho' theſe may be rendered leſs diſagreeable both to the palate and ſtomach, by the addition of aromatic diſtilled waters. This root yields the whole of its virtues, both to aqueous and vinous menſtrua, and likewiſe to vegetable acids. Its officinal preparations are, baked ſquills [*L.*] and the baked ſquills made into troches [*L.*] deſigned as an ingredient in theriaca [*L.*]; dried ſquills [*L.*] a ſyrup, vinegar, oxymel [*L. E.*] and pills [*E.*]

SCLAREA, vide HORMINUM.

SCOLOPENDRIUM, v. LINGUA CERVINA.

SCORDII *folia: Chamædryon paluſtris caneſcentis Tourn. Tucri Scordii Lin.* Water-germander; the leaves [*L. E.*]

This is a ſmall, ſomewhat hairy plant, growing wild in ſome parts of England, though not very common; the ſhops are generally ſupplied from gardens. It has a bitter taſte, and a ſtrong diſagreeable ſmell. Scordium is of no great eſteem in the preſent practice, notwithſtanding the deobſtruent, diuretic, and ſudorific virtues for which it was formerly celebrated. It enters the mithridate, theriaca, and cataplaſm of cummin ſeed [*L.*]; and gives name to two compound powders and an electary [*L.*] though not the moſt valuable of their ingredients.

SCORZONERÆ *radix. Scorzoneræ latifoliæ ſinuatæ C. B. Scorzoneræ hiſpanicæ Lin.* Vipers graſs; the root [*E.*]

Scorzonera is met with only in

gardens. The roots abound with a milky juice, of a bitteriſh ſubacrid taſte; and hence may be of ſome ſervice, for ſtrengthening the tone of the viſcera, and promoting the fluid ſecretions. They were formerly celebrated as alexipharmics, and for throwing out the meaſles and ſmall-pox; but have now almoſt entirely loſt their character.

SCROPHULARIÆ VULGARIS *folia, radix: Scrophulariæ nodoſæ fœtida C. B.* Fig-wort; the leaves and root [*E.*]

This herb grows wild in woods and hedges: the roots are of a white colour, full of little knobs or protuberances on the ſurface. This appearance gained it formerly ſome repute againſt ſcrophulous diſorders and the piles; and hence it received its name: but modern practitioners expect no ſuch virtues from it. It has a faint unpleaſant ſmell, and a ſomewhat diſagreeable taſte.

SCROPHULARIÆ AQUATICÆ MAJORIS, *folia: Scrophulariæ maximæ radice fibroſa J. B.* Great water fig-wort; the leaves [*E.*]

This is a large plant, met with chiefly on the ſides of rivers. The leaves have a bitter taſte, and an ungrateful ſmell: they are principally celebrated, though on no very good grounds, as a corrector of ſena. See the article Sena.

SEBESTEN: *Mixa ſive Sebeſten J. B.* A ſort of plum, brought half dried from the Eaſt Indies: it is of a dark or blackiſh brown colour, with whitiſh or aſh-coloured cups; the fleſh ſticks cloſe to the ſtone, which contains ſometimes one and ſometimes two kernels. This fruit has a ſweet, very glutinous taſte: and hence has been employed for ſoftening acrimonious humours, in ſome kinds of hoarſeneſs, and in coughs from thin ſharp defluxions. At preſent it is not often met with in the ſhops.

SEDI MAJORIS, *ſeu Sempervivi majoris folia: edi majoris vulgaris C. B. Sempervivi tectorum Lin.* Great houſe-leek; the leaves [*E.*]

This is a low fleſhy-leaved plant, growing on old walls, and on the tops of houſes. It ſtands recommended as a cooler, though its ſenſible qualities diſcover no great foundation for any virtue of this kind: the taſte is herbaceous, with a ſlight degree of pungency. It is remarkable of this plant, that its juice purified by filtration (when it appears of a dilute yellowiſh colour) upon the admixture of an equal quantity of rectified ſpirit of wine, forms a beautiful white light coagulum, like the finer kinds of pomatum. This proves extremely volatile; freed from the aqueous phlegm, and expoſed to the air, it in a very little time totally exhales. Hence it is concluded (in the medicor Sileſiac ſatyræ) that houſeleek contains a volatile alkaline ſalt: but there are many ſubſtances beſides theſe ſalts which coagulate with ſpirit of wine.

SEMPERVIVUM, v. Sedum.

SENA [*L. E.*] the leaves of a ſhrubby plant (*ſena Alexandria foliis acutis C. B. Caſſia (Senna) Lin.*) cultivated in Perſia, Syria, and Arabia; whence they are brought, dried and picked from the ſtalks, to Alexandria in Egypt; and thence imported into Europe. They are of an oblong figure, ſharp pointed at the ends, about a quarter of an inch broad, and not a full inch in length, of a lively yellowiſh green colour, a faint not very diſagreeable ſmell, and a ſubacrid, bitteriſh, nauſeous taſte. Some inferior ſorts are brought from Tripoli and other places; theſe may eaſily be diſtinguiſhed by their being either narrower, longer, and ſharper pointed; or larger, broader, and round pointed, with ſmall prominent veins; or large and obtuſe, of a freſh green colour, without any yellow caſt.

Sena is a very uſeful cathartic, operating mildly, and yet effectually: and, if judiciouſly doſed and managed, rarely occaſioning the ill conſequences which too frequently follow the exhibition of the ſtronger purges. The only inconveniencies complained of in this drug are, its being apt to gripe, and its nauſeous flavour. The *griping* quality depends upon a reſinous ſubſtance, which, like the other bodies of this claſs, is naturally diſpoſed to adhere to the coats of the inteſtines: the more this reſin is divided by ſuch matters as take off its tenacity, the leſs adheſive, and conſequently the leſs irritating and griping it will prove; and the leſs it is divided, the more griping. Hence ſena given by itſelf, or infuſions made in a very ſmall quantity of fluid, gripe ſeverely and purge leſs than when diluted by a large portion of ſuitable menſtruum, or divided by mixing the infuſion with oily emulſions. The *ill flavour* of this drug is ſaid to be abated by the great water figwort: but we cannot conceive that this plant, whoſe ſmell is manifeſtly fetid, and its taſte nauſeous and bitter, can at all improve thoſe of ſena: others recommend bohea tea, though neither has this any conſiderable effect. The ſmell of ſena reſides in its more volatile parts, and may be diſcharged by lightly boiling infuſions of it made in water: the liquor thus freed from the peculiar flavour of the ſena, may be eaſily rendered grateful to the taſte, by the addition of any proper aromatic tincture or diſtilled water. The colleges, both of London and Edinburgh, have given ſeveral very elegant infuſions of this drug (which may be ſeen in Part III. chap iii.) and alſo ſpirituous tinctures [*L. E.*] compound powders [*L. E.*] and a ſyrup [*L.*] The doſe of ſena in ſubſtance is from a ſcruple to a dram; in infuſion from one to three or four drams.

It has been cuſtomary to reject the pedicles of the leaves of ſena as of little or no uſe: Geoffroy however obſerves, that they are not much inferior in efficacy to the leaves themſelves. The pods, or ſeed-veſſels, met with among the ſena brought to us, are by the college of Bruſſels preferred to the leaves. They are leſs apt to gripe, but proportionably leſs purgative.

SENECIO, vide ERIGERUM.

SENEKA [*E.*] *Polygala (ſenega) Lin.* Senecka, rattle-ſnake root; the root of a ſpecies of *polygala*, which grows ſpontaneouſly in Virginia, and bears the winters of our own climate. This root is uſually about the thickneſs of the little finger, variouſly bent and contorted, and appears as if compoſed of joints, whence it is ſuppoſed to reſemble the tail of the animal whoſe name it bears. A kind of membranous margin runs on each ſide, the whole length of the root. Its taſte is at firſt acid, afterwards very hot and pungent.

This root is not at preſent much known in the ſhops. The Senegaro Indians are ſaid to prevent the fatal effects which follow from the bite of the rattle-ſnake, by giving it internally, and applying it externally to the wound. It has of late been ſtrongly recommended in pleuriſies, peripneumonies, and other inflammatory diſtempers. In theſe caſes, Lemery, du Hamel, and Juſſieu, experienced its good ſucceſs (ſee the French memoirs for the years 1738, 1739.) Its more immediate effects are thoſe of a diuretic, diaphoretic, and cathartic; ſometimes it proves emetic: the two laſt operations may be occaſionally prevented, by giving the root in ſmall doſes, along with aromatic ſimple waters, as that of cinnamon. The uſual doſe of the powder is thirty grains or more.

Some have likewiſe employed this root in hydropic caſes, and not without ſucceſs: Bouvart (in the memoirs before mentioned, 1744) relates examples of its occaſioning a plentiful evacuation by ſtool, urine and perſpiration, and by theſe means removing the diſeaſe, after the common diuretics and hydragogues had failed: where this medicine operates as a cathartic, it generally proves ſucceſsful; if it act by liquifying the blood and juices, without occaſioning a due diſcharge, it ſhould either be abſtained from, or aſſiſted by proper additions.

SERICUM *et folliculi bombycis.* Silk and ſilkworms bags. Theſe are ſcarce ever made uſe of for any medicinal purpoſes. In their crude ſtate they are certainly very inſignificant: though if burnt in a cloſe veſſel, after the ſame manner as ſponge, they would probably prove a medicine of ſimilar, and perhaps of ſuperior virtue. They yield a larger quantity of volatile ſalt, than any other animal ſubſtance I know.

SERPENTARIA VIRGINIANA [*L. E.*] *Ariſtolochia ſerpentaria Lin.* Virginian ſnake-root; the root of a ſpecies of ariſtolochia, growing in Virginia and Carolina.

It is a ſmall, light, buſhy root, conſiſting of a number of ſtrings or fibres, matted together, iſſuing from one common head; of a browniſh colour on the outſide, and paler or yellowiſh within. It has an aromatic ſmell, like that of valerian, but more agreeable; and a warm, bitteriſh, pungent taſte. This root is a warm diaphoretic and diuretic: it has been greatly celebrated as an alexipharmic, and eſteemed one of the principal remedies in malignant fevers and epidemic diſeaſes. In theſe intentions, it is given in ſubſtance from ten to thirty grains, and in infuſion to a dram or two. Both watery and ſpirituous menſtrua extract its virtue by infuſion, and elevate ſome ſhare of its flavour in diſtillation: along with the water a ſmall portion of eſſential oil ariſes. A ſpirituous tincture [*L. E.*] and compound decoction [*E.*] of it are directed as officinals: it enters alſo the cephalic tincture, compound tincture of Peruvian bark, ſudorific tincture, tinctura ſacra, ſtomachic elixir, theriaca Edinenſis [*E.*] and cataplaſm of cummin-ſeed [*L.*]

SERPILLI *folia: Serpilli vulgaris minoris C. B. Thymi Serpilli Lin.* Mother of thyme; the herb [*E.*]

This is a ſmall creeping plant, common on heaths and dry paſture grounds. Its taſte, ſmell, and medical virtues are ſimilar to thoſe of thyme, but weaker.

SESAMI *ſemen: Digitalis orientalis ſeſam dictæ Tourn.* The ſeeds called oily purging grain.

This plant is cultivated in the eaſtern countries, whence the ſeeds are brought to us. They very properly deſerve the name of oily, as they yield upon expreſſion a larger quantity of oil, than almoſt any other known vegetable. To the appellation purging, they have no title; among the Indians, they are ſaid to be uſed as food.

SESELIS VULGARIS *ſemen: Liguſtici quod ſeſeli officinarum C. B. Laſerpitium Siler Lin.* Common hartwort; the ſeeds [*L. E.*]

SESELIS MASSILIENSIS *ſemen: Seſelis Maſſilienſis ferulæ folio. C. B. Seſelis tortuoſi Lin.* Italian hartwort; the ſeeds [*L E.*]

Theſe plants grow ſpontaneouſly in the warmer climates; amongſt us they are met with only in the gardens of the curious. The ſeeds and roots of both ſorts have an agreeable aromatic ſmell and taſte; and in this light might be occaſionally employed, though at preſent they are in diſuſe: being ſcarcely otherwiſe regarded than as the ſeeds of the firſt ſort are an ingredient in mithridate and theriaca.

SESELI PRATENSE, vide SAXIFRAGA VULGARIS.

SIGILLI SALOMONIS, *ſeu Polygonati radix: Polygonati latifolii vulgaris C. B. Convallariæ multifloræ Lin.* Solomon's ſeal; the root [*E.*]

This grows wild in woods, but is not very common: the root has ſeveral joints, with ſome flat circular depreſſions, ſuppoſed to reſemble the ſtamp of a ſeal. It has a ſweetiſh mucilaginous taſte. As to its virtues, practitioners do not now expect any conſiderable ones from it, and pay very little regard to the vulnerary qualities for which it was formerly celebrated.

SILER MONTANUM, vide SESELI VULGARE.

SIMAROUBA [*E.*] *Quaſſica Simarouba Lin.* a bark with pieces of the wood adhering to it, brought from Guinea, in long tough pieces, of a pale yellowiſh colour, and a pretty ſtrong bitter taſte. It has lately come into eſteem in dyſenteric fluxes. A decoction of half a dram is given for a doſe, and repeated at intervals of three or four hours.

SINAPIS *ſemen: Sinapis rapi folio C. B. Sinapis nigræ Lin.* Muſtard; the ſeeds [*L. E.*]

This plant is ſometimes found wild, but for culinary and medicinal uſes is cultivated in gardens. Muſtard, by its acrimony and pungency, ſtimulates the ſolids, and attenuates viſcid juices; and hence ſtands deſervedly recommended for exciting appetite, promoting digeſtion, increaſing the fluid ſecretions, and for the other purpoſes of the acrid plants called antiſcorbutic. It imparts its taſte and ſmell in perfection to aqueous liquors, whilſt rectified ſpirit extracts very little of either: the whole of the pungency ariſes with water in diſtillation. Committed to the preſs, it yields a conſiderable quantity of a ſoft inſipid oil, perfectly void of acrimony: the cake left after the expreſſion is more pungent than the muſtard was at firſt. The oil is directed as an officinal [*L. E.*] Theſe ſeeds are ſometimes employed externally as a ſtimulant; and give name to a compoſition for this intention in the Edinburgh diſpenſatory.

SISON, v. AMOMUM VULGARE.

SMYRNIUM, vide HIPPOSELINUM.

SOLANI VULGARIS *folia: Solani hortenſis ſeu vulgaris J. B.* Common nightſhade; the leaves.

SOLANI LETHALIS, *ſeu Belladonnæ folia: Solani melanoceraſi C. B. Atropæ Belladonnæ Lin.* Deadly nightſhade: the leaves.

Theſe plants grow wild; the firſt in cultivated grounds, the ſecond in ſhady waſte ones. They have both been ſuppoſed cooling and diſcutient in external applications, and poiſonous when taken internally. Late experience has ſhewn, that an infuſion of half a grain or a grain of the dried leaves of either may be taken with ſafety, and that in many caſes the doſe may be increaſed by degrees to five or ſix grains; that they generally occaſion ſome conſiderable evacuation, and ſometimes, eſpecially in the larger of the above doſes, alarming nervous ſymptoms, which however ceaſe with the operation of the medicine. It has been expected, that a cautious uſe of theſe very active plants would afford relief in ſome obſtinate diſorders: but though in ſome inſtances they promiſed great benefit, the general event of theſe trials has not been very favourable. The Edinburgh college, who retained theſe plants at the reviſal of their Pharmacopœia in the year 1744, rejected them both in 1756.

SOLANUM LIGNOSUM, vide DULCAMARA.

SOLDANELLA, vide BRASSICA MARINA.

SPERMA CETI [*L. E.*] improperly ſo called: an unctuous flaky ſubſtance, of a ſnowy whiteneſs, a ſoft butyraceous taſte, without any remarkable ſmell; ſaid to be prepared from the fat of the brain of the whale, by boiling and purifying it with alkaline lixivia. The virtues of this concrete are thoſe of a mild emollient: it is of conſiderable uſe in pains and eroſions of the inteſtines, in coughs proceeding from thin ſharp defluxions, and in general, in all caſes where the ſolids require to be relaxed, or acrimonious humours to be ſoftened For external purpoſes, it readily diſſolves in oils; and for internal ones, may be united with aqueous liquors into the form of an emulſion, by the mediation of almonds, gums, or yolk of an egg. Sugar does not render it perfectly miſcible with water; and alkalies, which change other oils and fats into ſoap, have little effect upon ſperma ceti. This drug ought to be kept very cloſely from the air, otherwiſe its white colour ſoon changes into a yellow: and its mild unctuous taſte, into a rancid and offenſive one. After it has ſuffered this diſagreeable alteration, both the colour and quality may be recovered again by ſteeping it in alkaline liquors, or in a ſufficient quantity of ſpirit of wine.

SPICA VULGARIS, vide LAVENDULA ANGUSTIFOLIA.

SPICA NARDI vide NARDUS INDICA.

* SPIGELIA *Ph. Edinb. Anthelmia Dr. Lining. Spigelia marilandica Lin.* Indian Pink: this plant has a perennial fibrous root, whence ariſe ſingle ſtems, beſet with oppoſite oval-lanceolate, entire leaves, and crowned with a ſpike of tubular monopetalous red flowers, with five ſtamina and one piſtil. Each flower is ſucceeded by two round united bivalvular capſules, containing ſeveral ſmall ſeeds. It grows ſpontaneouſly in South Carolina, and other ſouthern provinces of North America.

The uſe of the root of this plant as an anthelmintic, was communicated

cated from the native Indians to the coloniſts, and it has ſince been much employed in that country. The firſt account of its virtues is to be met with in a paper of Dr. Lining's, Vol. I. of the Eſſays Phyſical and Literary; and Dr. Garden has confirmed it in Vol. III. of the ſame publication, and has given a figure and particular deſcription of the plant.

The root is given both in powder and infuſion; but the powder is eſteemed moſt efficacious. The doſe is not accurately aſcertained, but extends to from twelve to ſixty or ſeventy grains of the powder. It is found to be moſt efficacious when it purges, which it does not always without ſome additions. The exhibition of a vomit previous to the uſe of the Indian pink has proved very ſerviceable. It ſometimes produces diſagreeable effects on the nervous ſyſtem, ſuch as giddineſs, dimneſs of the ſight, and convulſive motions of the muſcles of the eye. It is ſaid to act powerfully as a ſedative in abating the exacerbations of low remittent worm-fevers.

SPINÆ CERVINÆ *baccæ: Rhamni cathartici C. B.* Buckthorn; the berries [*L. E.*]

This tree, or buſh, is common in hedges: it flowers in June, and ripens its fruit in September, or the beginning of October. In our markets, the fruit of ſome other trees, as the *frangula* or black berry-bearing alder, and the *cornus fœmina* or dogberry-tree, have of late years been frequently mixed with, or ſubſtituted for, thoſe of buckthorn. This abuſe may be diſcovered by opening the berries: thoſe of buckthorn have almoſt always four ſeeds, the berries of the *frangula* two, and thoſe of the *cornus fœmina* only one. Buckthorn berries, bruiſed on white paper, give it a green tincture, which the others do not. Thoſe who ſell the juice to the apothecaries, are ſaid to mix with it a large proportion of water.

Buckthorn berries have a faint diſagreeable ſmell, and a nauſeous bitter taſte. They have long been in conſiderable eſteem as cathartics; and celebrated in dropſies, rheumatiſms, and even in the gout; though in theſe caſes, they have no advantage over other purgatives, and are more offenſive, and operate more churliſhly, than many with which the ſhops are furniſhed; they generally occaſion gripes, ſickneſs, dry the mouth and throat, and leave a thirſt of long duration. The doſe is about twenty of the freſh berries in ſubſtance, and twice or thrice this number in decoction, an ounce of the expreſſed juice, or a dram of the dried berries. A ſyrup prepared from the juice is kept in the ſhops. In this preparation, the nauſeous flavour of the buckthorn is ſomewhat alleviated by the ſugar, and the addition of aromatics.

SPIRITUS VINOSUS RECTIFICATUS. Rectified ſpirit of wine; "a ſpirit diſtilled from wine "or other fermented liquors, pu"rified as much as poſſible from "its fetid ſmell, and the phlegm "that ariſes with it in the firſt di"ſtillation." [*L.*] This purification is effected, by repeating the diſtillation in a very gentle heat, with certain additions, to keep down the phlegm and the groſs oil in which the ill flavour reſides (ſee Part III. chap. v.) Theſe ſpirits, from whatever vegetable ſubjects they have been produced, are, when perfectly pure, the ſame. They have a hot pungent taſte, without any particular flavour; they readily catch flame, and burn entirely away, without leaving any marks of an aqueous moiſture behind; diſtilled by a heat leſs than that of boiling water, they totally ariſe, the laſt runnings proving as flavourleſs and inflammable as the firſt: they diſſolve eſſential vegetable oils and reſins into an uniform tranſparent fluid. Theſe ſpirits are the lighteſt of almoſt all known liquors: expreſſed oils, which ſwim upon water, ſink in theſe to the bottom: a meaſure which contains ten ounces by weight of water, will hold little more than eight and a quarter of pure ſpirit.

The uſes of vinous ſpirits, as menſtrua for the virtues of other medicines, we ſhall ſee hereafter, and in this place conſider only their own. Pure ſpirit coagulates all the fluids of animal bodies, except urine, and hardens the ſolid parts. Applied externally, it ſtrengthens the veſſels, thickens the juices in them, and thus powerfully reſtrains hæmorrhages. It inſtantly contracts the extremities of the nerves it touches, and deprives them of ſenſe and motion; by theſe means eaſing them of pain, but at the ſame time deſtroying their uſe. Hence employing ſpirituous liquors in fomentations (notwithſtanding the ſpecious titles of vivifying, heating, reſtoring mobility, reſolving, diſſipating, and the like, uſually attributed to them) may ſometimes be attended with unhappy conſequences. Theſe liquors, received undiluted into the ſtomach, produce the ſame effects, thickening the fluid, and contracting all the ſolid parts which they touch, and deſtroying, at leaſt for a time, their uſe and office: if the quantity be conſiderable, a palſy or apoplexy follows, which ends in death. Taken in ſmall quantity, and duly diluted, they brace up the fibres, raiſe the ſpirits, and promote agility: if further continued, the ſenſes are diſordered, voluntary motion deſtroyed, and at length the ſame inconveniences brought on as before. Vinous ſpirits therefore, in ſmall doſes, and properly diluted, may be applied to uſeful purpoſes in the cure of diſeaſes; whilſt in larger ones, or if their uſe be long continued, they act as a poiſon of a particular kind.

SPIRITUS VINOSUS TENUIOR. Proof ſpirit: "the "ſame ſpirit, containing an ad-"mixture of an equal quantity of "water: the beſt proof ſpirit is "that diſtilled from French wine; "but for common uſes may be "employed the ſpirit drawn from "melaſſes, or the ſyrupy matter "that runs from ſugar in the pu-"rification, commonly called me-"laſſes ſpirit." [*L.*] The ſpirits uſually met with under the name of proof, are thoſe diſtilled from different fermented liquors, freed from their phlegm and ill flavour only to a certain degree. Their purity with regard to flavour may be eaſily judged from the taſte, eſpecially if the ſpirit be firſt duly diluted. It were to be wiſhed, that we had a certain ſtandard with regard to their ſtrength, or the quantity of water contained in them; a circumſtance which greatly influences ſundry medicinal preparations, particularly the tinctures: for as pure ſpirit diſſolves the reſin and volatile oil, and water only the gummy and ſaline parts of vegetables, it is evident that a variation in the proportions wherein theſe are mixed, will vary the diſſolving power of the menſtruum, and conſequently the virtue of the preparation. The common methods of eſtimating the quantity of phlegm contained in theſe ſpirits, are liable to uncertainty: it ſhould therefore ſeem neceſſary for the nicer purpoſes, and where a perfectly flavourleſs proof ſpirit is required, to make uſe of the pure rectified ſpirit, mixed with a certain determined proportion of water: equal quantities of theſe liquors, whether taken by weight or meaſure, compoſe a ſpirit ſomewhat weaker than what has been generally looked upon as proof: the exact proportions are, one hundred parts by weight of pure ſpirit, and eighty-ſix of water.

SPONGIA [*L. E.*] Sponge; a ſoft, light, very porous and compreſſible ſubſtance, readily imbibing water. and diſtending thereby. It is found adhering to rocks, particularly in the Mediterranean ſea, about the iſlands of the Archipelago. It is generally ſuppoſed to be a vegetable production: nevertheleſs ſome obſervations, lately made by Juſſieu, give room to ſuſpect that it is of animal origin. Chemical experiments favour this ſuppoſition; analyſed, it yields the ſame principles with animal ſubſtances in general: the volatile ſalt is in larger quantity than I have obtained from any animal matter, except the bags of the ſilkworm. On this ſalt, which is generated by fire, ſeem to depend the virtues of the officinal *ſpongia uſta* [*L.*] (See Part III. chap. i.) Crude ſponge, from its property of imbibing and diſtending by moiſture, is ſometimes made uſe of as a tent for dilating wounds and ulcers.

STANNUM [*L. E.*] Tin is the lighteſt and eaſieſt of fuſion of all the metals. Heated, it becomes ſo brittle as to fall in pieces by a blow; and by agitation (when juſt ready to melt) into a powder; hence the officinal method of pulveriſing this metal, to be deſcribed in its place. The proper menſtruum of tin is the marine acid, or aqua regis: vegetable acids likewiſe diſſolve it in conſiderable quantity, though it has long been ſuppoſed not to be at all ſoluble in them, unleſs previouſly well calcined.

With regard to the virtues of this metal, it was formerly accounted a ſpecific in diſorders of the uterus and lungs; a calx of tin and antimony is ſtill retained in ſome diſpenſatories, under the name of an antihectic: but theſe are virtues, to which it certainly has little claim It has of late been celebrated, on better foundation, as an anthelmintic; and ſaid to deſtroy ſome kinds of worms which elude the force of many other medicines. Poſſibly the cauſe of this effect may be very different from what may be ſuſpected, an admixture of a portion of arſenic.

Tin has a ſtrong affinity with arſenic: inſomuch that when once united therewith, the arſenic, notwithſtanding its volatility in other circumſtances, cannot be totally expelled either by ſlow calcination, or by a vehement fire. Almoſt all the ores of tin contain more or leſs of this poiſonous mineral, which is not entirely ſeparable in the common proceſſes by which the ores are run down, or the metal further purified. Filings of tin held in the flame of a candle, emit a thick fume, ſmelling of garlic; which ſmell is univerſally held, in mineral ſubſtances, to be a certain criterion of arſenic. Henckel has diſcovered a method of ſeparating actual arſenic from tin; this is effected by ſolution in aqua regis and cryſtallization: Mr. Margraff has (in a volume of the Berlin memoirs) given a farther account of this proceſs; and relates, that from the tins uſually reputed pure, he has obtained one-eighth their weight of cryſtals of arſenic. For the preparations of tin, ſee the third part of this work.

STAPHISAGRIÆ *ſemen: Delphinii platoni folio Tourn. Delphinii Staphyſagriæ Lin.* Staveſacre; the ſeeds [*E.*]

Theſe are large rough ſeeds, of an irregularly triangular figure, of a blackiſh colour on the outſide, and yellowiſh or whitiſh within. They are uſually brought from Italy; the plant is not very common in this country, though it bears our ſevereſt colds. They have a diſagreeable ſmell, and a very nauſeous, bitteriſh, burning taſte. Staveſacre was employed by the antients as a cathartic; but it operates with ſo much violence both upwards and downwards, that its internal uſe has been, among the generality of practitioners, for ſome time laid aſide. It is chiefly employed, in external applications, for ſome kinds of cutaneous eruptions, and for deſtroying lice and other inſects; inſomuch, that it has from this virtue received its name, in different languages; *herba pedicularis, herbe aux poux, lauſskraut, louſewort.*

STIBIUM, vide ANTIMONIUM.

STŒCHAS, *Stœchas purpurea C. B. Lavendulæ Stœchas.* Arabian ſtechas, or French lavender flowers [*L. E.*]

This is a ſhrubby plant, conſiderably ſmaller than the common lavender: the flowery heads are brought from Italy and the ſouthern parts of France. They are very apt to grow mouldy in the paſſage, and even when they eſcape this inconvenience, are generally much inferior to thoſe raiſed in our gardens. The beſt ſtechas which we receive from abroad, has no great ſmell or taſte. Pomet affirms, that ſuch as the ſhops of Paris are ſupplied with, is entirely deſtitute of both; whilſt that of our own growth, either whilſt freſh, or when carefully dried, has a very fragrant ſmell, and a warm, aromatic, bitteriſh, ſubacrid taſte; diſtilled with water, it yields a conſiderable quantity of a fragrant eſſential oil; to rectified ſpirit it imparts a ſtrong tincture, which inſpiſſated proves an elegant aromatic extract. This aromatic plant is rarely met with in preſcription; the only officinal compoſitions into which it is admitted, are the mithridate and theriaca.

There is another plant called ſtechas, which from the beauty and durability of its flowers has of late years had a place in our gardens, and whoſe aromatic qualities render it worthy of one in the ſhops; this is the *elichryſum ſeu ſtœchas citrina latiore folio C. B.* golden ſtechas, goldilocks, or yellow caſſidony: its flowers ſtand in umbels on the tops of the branches; they are of a deep ſhining yellow colour, which they retain in perfection for many years; their ſmell is fragrant and agreeable, ſomewhat of the muſky kind; their taſte warm, pungent, and ſub-aſtringent; they impart their flavour to water in diſtillation, and by infuſion to rectified ſpirit.

* STRAMONIUM [*E.*] *Solanum fœtidum, pomo ſpinoſo oblongo C. B. Datura Stramonium Lin.* Thorn-Apple: an herbaceous plant, with a thick branched ſtalk, two or three feet high, large ſinuated leaves, and long tubular white or purpliſh flowers, ſucceeded by large, prickly, green, fleſhy ſeed-veſſels, which open at the end in four diviſions, and diſcloſe numerous black ſeeds. It flowers in July.

This plant, which has been long known as a narcotic poiſon, has been introduced into the catalogue of medicines by Dr. Stœrck. An extract made from the expreſſed juice of the leaves is acrid and ſaline to the taſte, and yields chryſtals of nitre on ſtanding. This preparation, given in doſes of from one to five grains twice or thrice a day, is ſaid to be a very powerful remedy in various convulſive and ſpaſmodic diſorders, epilepſy and mania. The accounts of other practitioners have confirmed it; and it has been received into ſome pharmacopœias. An ointment prepared from the leaves has been found to give eaſe in external inflammations and hæmorrhoids.

STYRAX CALAMITA [*L.E.*] Storax; an odoriferous reſinous ſubſtance, exuding, in the warmer climates, from a tree called by C. Bauhine *ſtyrax folio mali cotonei.* It has been cuſtomary to diſtinguiſh three ſorts of ſtorax, though only one is uſually met with in the ſhops.

1. *Styrax calamita,* or ſtorax in the cane, ſo called from its having been formerly brought incloſed in reeds from Pamphylia. It is either in ſmall diſtinct tears, of a whitiſh or reddiſh colour, or in larger maſſes compoſed of ſuch.

2. *Storax in the lump,* or red ſtorax. This is in maſſes of an uniform texture and yellowiſh red or browniſh colour, though ſometimes likewiſe interſperſed with a few whitiſh grains. Of this ſort there has been ſome to be met with in the ſhops, under the name of ſtorax in the tear.

3. The *common ſtorax* of the ſhops is in large maſſes, conſiderably lighter and leſs compact than the foregoing. It appears upon examination to be compoſed of a fine reſinous juice, mixed with a quantity of ſaw-duſt. For what purpoſe this addition is made, I ſhall not here enquire; obſerving only, that it can ſcarce be ſuppoſed to be done with any fraudulent view, ſince the ſaw-duſt appears at ſight. This common ſtorax is much leſs eſteemed than the two firſt ſorts; though, when freed from the woody matter, it proves ſuperior in point of fragrancy to either of them. Rectified ſpirit, the common menſtruum of reſins, diſſolves the ſtorax, leaving the wood behind: nor does this tincture loſe much of its valuable parts, in being inſpiſſated to a ſolid conſiſtence; whilſt aqueous liquors elevate almoſt all the fragrancy of the ſtorax.

Storax is one of the moſt agreeable of the odoriferous reſins, and may be exhibited to great advantage in languors and debilities of the nervous ſyſtem. It is not however much uſed in common practice, unleſs as an ingredient in the traumatic balſam, the compound powder and electary of ſcordium, the ſtorax pill, confectio Paulina, mithridate, and theriaca [*L.*]

STYRAX LIQUIDA [*E.*] Liquid ſtorax. What is moſt commonly met with under this name, is a ſoft reſinous ſubſtance, of a grey colour, a weak ſmell similar to that of the foregoing ſolid ſtorax. It is ſuppoſed to be compounded of ſolid ſtorax, reſin, wine, and oil, beaten up together, into a proper conſiſtence. The genuine liquid ſtorax, according to Petiver's account (Phil. Tranſact. N° 313.) is obtained from a tree growing in the iſland Cobros in the Red ſea. The preparers of this commodity yearly clear off the bark of the tree, and boil it in ſea water to the conſiſtence of bird-lime; the reſinous matter which floats upon the ſurface, is taken off, liquified again in boiling water, and paſſed through a ſtrainer. The purer part which paſſes through, and the more impure which remains on the ſtrainer, and contains a conſiderable portion of the ſubſtance of the bark, are both ſent to Moco, whence they are ſometimes, though very rarely, brought to us. The former is of the conſiſtence of honey, tenacious, of a reddiſh or aſh brown colour, an acrid unctuous taſte, approaching in ſmell to the ſolid ſtorax, but ſo ſtrong as to be diſagreeable: the other is full of woody matter, and much weaker in ſmell.

Liquid ſtorax is among us ſcarce ever made uſe of in medicine, and not often found in the ſhops; hence the London college has expunged it from the catalogue of officinals: that of Edinburgh employs it as an ingredient in the mercurial plaſter.

SUCCINUM [*L. E.*] Amber; a ſolid, brittle, bituminous ſubſtance, dug out of the earth, or found upon the ſea ſhores. The largeſt quantities are met with along the coaſts of Poliſh Pruſſia and Pomerania. It is of a white, yellow, or brown colour, ſometimes opaque, and ſometimes very clear and tranſparent: the dark coloured and opaque ſorts, by digeſtion with certain expreſſed oils and animal fats, become clearer, paler coloured, more pellucid, and conſiderably harder. Amber boiled in water, neither ſoftens nor undergoes any ſenſible alteration: expoſed to a greater heat, without addition, it melts into a black maſs like ſome of the more common bitumens: ſet on fire, its ſmell reſembles that which ariſes from the finer kinds of pitcoal: diſtilled in a retort, it yields an oil and a volatile acidulous ſalt (ſee Part III. chap. viii.)

Amber in ſubſtance has very little ſmell or taſte; and hence it has by ſome been reckoned a mere inactive earthy body. It was formerly accounted an abſorbent, and as ſuch had a place in the compound powder of crabs claws. It certainly has no title to this claſs of medicines, as not being acted upon by any acid. It is ſuppoſed to be of ſervice in the fluor albus, gleets, hyſteric affections, &c. and in theſe intentions is ſometimes given in the form of impalpable powder, to the quantity of a dram. A tincture of amber made in rectified ſpirit (to which it imparts a bitteriſh aromatic taſte and a fragrant ſmell) promiſes to be of real ſervice in theſe diſorders. Boerhaave extols this tincture as having incredible efficacy in all thoſe diſtempers which proceed from weakneſs and relaxation, and in hypochondriacal, hyſterical, and cold languid caſes. If part of the ſpirit be abſtracted by a gentle heat, the remainder proves a very elegant aromatic balſam, which is perhaps one of the moſt uſeful preparations obtainable from this concrete. Amber is levigated in the ſhops into an impalpable powder, which gives name to a compound powder [*L.*] and is an ingredient in mithridate and theriaca [*L.*] A tincture of it in dulcified ſpirit of vitriol [*E.*] and the diſtilled oil and ſalt [*L. E.*] are likewiſe officinals. The oil is an ingredient in the volatile aromatic ſpirit, powder for promoting delivery, gum pills, cephalic balſam, and cephalic plaſter [*E.*]

SULPHUR [*L. E.*] Sulphur or brimſtone is a yellow ſubſtance, of the mineral kingdom, fuſible in a ſmall degree of heat, totally volatile in a ſtronger, readily inflammable, burning with a blue flame, which is accompanied with a ſuffocating acid fume. It diſſolves in alkaline liquors and in oils, not in acids, water, or vinous ſpirits.

Greateſt part of the ſulphur met with in the ſhops is obtained from certain ores by a kind of diſtillation, or artificially compoſed by uniting the vitrolic acid with inflammable matters. At ſome of the Saxon ſulphur works (whence we are chiefly ſupplied) certain minerals abounding with vitrolic acid, but containing little or no ſulphur, being ſtratified with wood, and the latter ſet on fire, a large quantity of fine ſulphur is produced. It is uſually brought to us in large irregular maſſes, which are afterwards melted and caſt into cylindrical rolls, with the addition of ſome coarſe reſin, flour, or the like; whence the paler colour of the rolls. Sulphur is not alſo unfrequently found native in the earth, ſometimes in tranſparent pieces of a greeniſh or bright yellow colour; but more commonly in opaque grey ones, with only ſome ſtreaks of yellow. This laſt is the ſort which is underſtood by the name SULPHUR VIVUM[*E.*] though that met with under this name in the ſhops is no other than the droſs remaining after the ſublimation of ſulphur. All the ſorts of ſulphur are, when perfectly pure, in no reſpect different from one another: notwithſtanding the preference given by ſome to the more uncommon foſſil ſorts, theſe laſt are of all others the leaſt proper for medicinal purpoſes, as being the moſt ſubject to an admixture of foreign matter, both of the metallic and arſenical kind.

Pure ſulphur looſens the belly, and promotes inſenſible perſpiration: it ſeems to paſs through the whole habit, and manifeſtly tranſpires through the pores of the ſkin, as appears from the ſulphureous ſmell of perſons who have taken it, and ſilver being ſtained in their pockets of a blackiſh colour, which is the known effect of ſulphureous fumes. It is a celebrated remedy againſt cutaneous diſeaſes, both given internally, and externally applied. It has likewiſe been recommended in coughs, aſthmas, and other diſorders of the breaſt and lungs; in theſe caſes, however, it has no very conſiderable effect, unleſs, as Hoffman obſerves, where the diſeaſe proceeds from the blood's being tainted by ſcrophulous or ſcorbutic humours. Where this happens, the prudent uſe of ſulphur is ſaid to do good ſervice, throwing out a plentiful eruption upon the ſkin, and by degrees carrying off the peccant matter. The common doſe of ſulphur rarely exceeds a ſcruple, though Geoffroy goes as far as two drams. The *trochiſci e ſulphure* of the diſpenſatory are one of the moſt elegant forms for the taking of it. It enters ſix officinal preparations for external uſe, and gives name to one of them. Some have imagined that ſulphur uſed externally is dangerous; that, as it throws the morbific matter outwards, when given inwardly, it muſt in like manner drive it into the blood, when applied externally. This opinion, which is ſupported by ſome late writers, has no juſt foundation. Sulphur has nearly the ſame effects, whether uſed internally or externally. In both caſes, the eruptions become frequently more copious after the firſt uſe of it.

It is remarkable of this concrete, that though itſelf a medicine of conſiderable efficacy, it nevertheleſs reſtrains that of ſome others of the moſt powerful kind. Mercury is rendered, by the admixture of ſulphur, inactive; and the virulent antimonial regulus, almoſt ſo. Hence, when antimonial and mercurial medicines exceed in operation, ſulphur has been given for abating their violence; and ſometimes reſtrains their farther action. Even the corroſive poiſon arſenic, by the addition of ſulphur, becomes almoſt innocent; and hence if a ſmall proportion of arſenic ſhould be contained in ſulphur, it poſſibly may not receive thence any poiſonous qualities.

SYMPHYTUM, vide CONSOLIDA.

TACAMAHACA [*E.*]: a reſin obtained from a tall tree (*tacamahaca populo ſimilis, fructu colore pœoniæ ſimili J B. Populus balſamifera Lin.*) which grows ſpontaneouſly on the continent of America, and in a ſheltered ſituation bears the winters of our own climate. Two ſorts of this reſin are ſometimes to be met with. The beſt, called (from its being collected in a kind of gourd-ſhells) tacamahaca in ſhells, is ſomewhat unctuous and ſoftiſh, of a pale yellowiſh or greeniſh colour, an aromatic taſte, and a fragrant delightful ſmell, approaching to that of lavender and ambergris. This ſort is very rare: that commonly found in the ſhops is in ſemitranſparent grains or glebes, of a whitiſh, yellowiſh, browniſh, or greeniſh colour, of a leſs grateful ſmell than the foregoing. The former is ſaid to exude from the fruit of the tree, the other from inciſions made in the trunk. This reſin is ſaid to be employed among the Indians, externally, for diſcuſſing and maturating tumours, and abating pains and aches of the limbs. It is an ingredient in the anodyne, hyſteric, cephalic, and ſtomachic plaſters of the Edinburgh pharmacopœia. The fragrance of the finer ſort ſufficiently points out its being applicable to other purpoſes.

TAMARINDUS [*L. E.*] Tamarind; the fruit of a tree growing in the Eaſt and Weſt Indies, called by C. Bauhine *ſiliqua Arabica quæ tamarindus. Tamarindus indica Lin.* It is a pod reſembling a bean-cod, including ſeveral hard ſeeds, together with a dark coloured viſcid pulp of a pleaſant acid taſte: the Eaſt-India tamarinds are longer than the Weſt-India ſort; the former containing ſix or ſeven ſeeds each, the latter rarely above three or four. The pulp of theſe fruits, taken in the quantity of two or three drams, or an ounce or more, proves gently laxative or purgative; and at the ſame time, by its acidity, quenches thirſt, and allays immoderate heat. It increaſes the action of the purgative ſweets, caſia and manna, and weakens that of the reſinous cathartics. Some have ſuppoſed it capable of abating the virulence of antimonial preparations; but experience ſhews, that it has rather a contrary effect, and that all vegetable acids augment their power. Tamarinds are an ingredient in the electary of caſia [*L.*] the lenitive electary [*E.*] and decoction of tamarinds with ſena [*E.*]

TANACETI *folia, flores, ſemen: Tanaceti vulgaris lutei C. B.* Tanſy: the leaves [*L.*] flowers and ſeeds [*E.*]

Tanſy grows wild by road-ſides, and the borders of fields, and is frequently alſo cultivated in gardens, both for culinary and medicinal uſes: it flowers in June and July. Conſidered as a medicine, it is a moderately warm bitter, accompanied with a ſtrong, not very diſagreeable flavour. Some have had a great opinion of it in hyſteric diſorders, particularly thoſe proceeding from a deficiency, or ſuppreſſion of the uterine purgations. The leaves and ſeeds have been of conſiderable eſteem as anthelmintics; the ſeeds are leſs bitter, and more acrid and aromatic than thoſe of rue, to which they are reckoned ſimilar; or of ſantonicum, for which they have been frequently ſubſtituted.

TAPSI BARBATI, *ſeu Verbaſci folia, flores: Verbaſci maris latifolii lutei C. B.* Mullein; the leaves and flowers.

This is met with by road-ſides, and under hedges: it is clothed all over with ſoft downy leaves, and produces long ſpikes of yellow flowers in July. The taſte diſcovers in it a glutinous quality; and hence it ſtands recommended as an emollient, and is in ſome places held in great eſteem in conſumptions. The flowers of mullein have an agreeable, honey-like ſweetneſs; an extract prepared from them by rectified ſpirit of wine taſtes extremely pleaſant.

TARAXACUM, v. DENS LEONIS.

TARTARUM [*L. E.*] Tartar is a ſaline ſubſtance, thrown off from wines, after fermentation, to the ſides and bottom of the caſk. It proves of a red or white colour, and more or leſs foul or droſſy, according to the colour and quality of the wine; the white is generally looked upon as the pureſt: of either ſort, ſuch as is clean, ſolid, ſomewhat tranſparent, and has its outſide covered over with ſmall ſhining chryſtals, is preferable to ſuch as appears porous, droſſy, opaque, and leſs bright. This ſubſtance, though truly ſaline, is ſcarce acted upon by cold water; the pureſt ſort, or ſuch as has been purified by art, requires four and-twenty times its weight of boiling water to diſſolve in: the ſolutions of both the tartars paſs the filter colourleſs, and ſhoot, in the cold, into ſmall, white, ſemitranſparent chryſtals. All ſuch earths as are ſoluble in vinegar, and alkaline ſalts, render tartar more eaſily ſoluble in water: hence the refiners at Montpelier are ſaid to employ a certain earth for promoting its ſolutions, with ſome particular managements for making it ſhoot into large cryſtals. This addition may occaſion a conſiderable alteration in the ſalt, inſomuch that the finer ſorts of white tartar are perhaps preferable, on many occaſions, to the common chryſtals. The virtues of tartar are thoſe of a mild, cooling, aperient, laxative medicine. Taken from half an ounce to an ounce, it proves a gentle, though effectual purgative. Angelus Sala relates, that he was cured of an habitual colic, by purging himſelf a few times with ſix drams of the crude ſalt, after many other medicines had been tried to no purpoſe. For the preparations of tartar, ſee Part III. chap. iii. ſect. 7. This ſalt is likewiſe an ingredient in the common infuſion of ſena, compound powder of ſena [*L.*] and is uſed for diſſolving or corroding ſome metallic bodies, particularly antimony, from which it receives a ſtrong emetic impregnation.

TELEPHIUM, vide CRASSULA.

TEREBINTHINÆ. Turpentines; reſinous juices extracted from certain trees. There are four kinds of turpentine diſtinguiſhed in the ſhops.

TEREBINTHINA CHIA, *ſive* CYPRIA [*L. E.*] Chio, or Cyprus turpentine.

This is generally about the conſiſtence of thick honey, very tenacious, clear and almoſt tranſparent, of a white colour, with a caſt of yellow, and frequently of blue. It has a warm, pungent, bitteriſh taſte; and a fragrant ſmell, more agreeable than any of the other turpentines.

This juice is the produce of the *terebinthus vulgaris C. B.* common terebinth, an evergreen tree or ſhrub, which grows ſpontaneouſly in the warmer climates, and endures the colds of our own. The turpentine brought to us, is extracted in the iſlands whoſe names it bears; by wounding the trunk and branches a little after the buds have come forth. The juice iſſues limpid, and clear as water, and by degrees thickens into the conſiſtence in which we meet with it. A like juice exuding from this tree in the eaſtern countries, inſpiſſated by a ſlow fire, is of frequent uſe, as a maſticatory, among the Perſian ladies, who (as Kœmpfer informs us) are continually chewing it, in order to faſten and whiten the teeth, ſweeten the breath, and promote appetite.

TEREBINTHINA VENETA [*E.*] Venice turpentine.

This is uſually thinner than any of the other ſorts, of a clear, whitiſh, or pale yellowiſh colour, a hot, pungent, bitteriſh, diſagreeable taſte, and a ſtrong ſmell, without any thing of the fine aromatic flavour of the Chian kind.

The true Venice turpentine is obtained from the *larix folio deciduo conifera J. B.* larch, a large tree growing in great abundance upon the Alps and Pyrenean mountains, and not uncommon in the Engliſh gardens. What is uſually met with in the ſhops, under the name of Venice turpentine, comes from New England. Of what tree it is the produce, we have no certain account: the finer kinds of it are in appearance and quality not conſiderably different from the true ſort above deſcribed.

TEREBINTHINA ARGENTORATENSIS [*L. E.*] Straſburgh turpentine.

This, as we generally meet with it, is of a middle conſiſtence betwixt the two foregoing, more tranſparent, and leſs tenacious than either; its colour a yellowiſh brown. Its ſmell is very fragrant, and more agreeable than that of any of the other turpentines, except the Chian; in taſte it is the bittereſt, yet the leaſt acrid.

This reſin is obtained from the two ſorts of fir trees mentioned before, which are the moſt plentiful, and perhaps the only ones that grow ſpontaneouſly in Europe. There is another whoſe reſin is much ſuperior to the common turpentine, and has ſometimes been brought to us from abroad under the name of Balsamum Canadense. This ſpecies is the *abies minor, pectinatis foliis, Virginiana conis parvis ſubrotundis Pluk.* Virginian, or Canada fir-tree; which, though not a native of this climate, has been found to endure its ſevereſt colds.

TEREBINTHINA COMMUNIS [*L. E.*] Common turpentine is the coarſeſt, and heavieſt, in taſte and ſmell the moſt diſagreeable, of all the ſorts: it is about the conſiſtence of honey, of an opaque browniſh white colour.

This is obtained from the *pinus ſylveſtris C. B.* wild pine, a low unhandſome tree, common in different parts of Europe; this tree is extremely reſinous, and remarkably ſubject to a diſeaſe from a redundance and extravaſation of its reſin, inſomuch that, without due evacuation, it ſwells and burſts. The juice as it iſſues from the tree is received in trenches made in the earth, and afterwards freed from the groſſer impurities by colature through wicker baſkets.

All theſe juices yield in diſtillation with water, an highly penetrating eſſential oil, a brittle inſipid reſin remaining behind. With regard to their medical virtues, they promote urine, cleanſe the parts concerned in the evacuation thereof, and deterge internal ulcers in general; and at the ſame time, like other bitter hot ſubſtances, ſtrengthen the tone of the veſſels: they have an advantage above moſt other acrid diuretics, that they gently looſen the belly. They are principally recommended in gleets, the fluor albus, and the like; and by ſome in calculous complaints: where theſe laſt proceed from ſand or gravel, formed into a maſs by viſcid mucous matter, the turpentines, by diſſolving the mucus, promote the expulſion of the ſand; but where a calculus is formed, they can do no ſervice, and only ineffectually irritate or inflame the parts. In all caſes accompanied with inflammation, theſe juices ought to be abſtained from, as this ſymptom is encreaſed, and not unfrequently occaſioned by them. It is obſervable, that the turpentines impart, ſoon after taking them, a violet ſmell to the urine; and have this effect, though applied only externally to remote parts; particularly the Venice ſort. This is accounted the moſt powerful as a diuretic and detergent; and the Chian and Straſburgh as corroborants: the Straſburgh is an ingredient in the mercurial pills and Locatellus's balſam, and the Chian in mithridate and theriaca [*L.*] The common turpentine, as being the moſt offenſive, is rarely given internally; its principal uſe is in plaſters and ointments among farriers, and for the diſtillation of the oil, or ſpirit, as it is called. The doſe of theſe juices is from a ſcruple to a dram and a half. They are moſt commodiouſly taken in the form of a bolus, or diſſolved in watery liquors by the mediation of the yolk of an egg or mucilage. Of the diſtilled oil, a few drops are a ſufficient doſe. This is a moſt potent, ſtimulating, detergent diuretic, often greatly heats the conſtitution, and requires the utmoſt caution in its exhibition.

TERRA JAPONICA, vide JAPONICA.

TERRA LEMNIA *et* SILESIACA, vide BOLUS.

THEÆ *folia* [*E.*] Tea; the leaves of a ſhrub (*thea frutex, folio ceraſi, flore roſæ ſylveſtris, &c. Kæmpf.*) cultivated in China.

The ſeveral ſorts of tea met with among us, are the leaves of the ſame plant, collected at different times, and cured in a ſomewhat different manner. The ſmall young leaves very carefully dried, are the finer green. The older afford the ordinary green and bohea. The two firſt have a ſenſible flavour of violets; the other of roſes. The former is the natural odour of the plant; the latter, as Neumann obſerves, is probably introduced by art. Some of the dealers in this commodity in Europe, are not ignorant that bohea tea is imitable by the leaves of certain common plants, artificially tinctured and impregnated with the roſe flavour. The taſte of both ſorts is lightly bitteriſh, ſubaſtringent, and ſomewhat aromatic. The medical virtues attributed to theſe leaves, are ſufficiently numerous, though few of them have any juſt foundation: little more can be expected from the common infuſions, than that of a diluent, acceptable to the palate and ſtomach: the diuretic, diaphoretic, and other virtues which they have been celebrated for, depend more on the quantity of warm fluid, than any particular qualities which it gains from the tea. Nothing ariſes in diſtillation from either ſort of tea with rectified ſpirit; water elevates the whole of their flavour.

THLASPIS, *ſemen*. Treacle, or mithridate, muſtard; the ſeeds [*L.*]

Two ſorts of thlaſpi are uſed promiſcuouſly, *thlaſpi arvenſe ſiliquis latis C. B.* and the *thlaſpi arvenſe vaccariæ incano folio majus C. B.* they both grow wild, the latter moſt plentifully. Theſe ſeeds have an acrid biting taſte like common muſtard, with which they agree in medical qualities. Their principal uſe is as ingredients in the compoſitions whoſe name they bear.

THUS MASCULUM, vide OLIBANUM.

THUS VULGARE [*L. E.*] Common frankincenſe; a ſolid, brittle reſin, brought to us in little glebes or maſſes, of a browniſh, or yellowiſh colour on the outſide, internally whitiſh, or variegated with whitiſh ſpecks; of a bitteriſh, acrid, not agreeable taſte, without any conſiderable ſmell. It is ſuppoſed to be the produce of the pine tree which yields the terebinthina communis; and to concrete on the ſurface of the terebinthinate juice ſoon after it has iſſued from the plant.

It is an ingredient in mithridate, the gum plaſter, ſtrengthening plaſter, and ſtomach plaſter [*L.*]

THYMI *folia*: *Thymi vulgaris folio tenuiore C. B.* Common thyme; the leaves [*E.*]

This plant is frequent in our gardens, and flowers in June and July. It has an agreeable aromatic ſmell, and a warm pungent taſte; which it imparts by infuſion to rectified ſpirit, and ſends over in diſtillation with water. Along with the water ariſes an eſſential oil, extremely hot and pungent.

THYMI CITRATI *folia*: *Serpylli foliis citri odore C. B.* Lemon-thyme; the leaves [*L.*]

This is found wild in dry mountainous places, but the ſhops are ſupplied from gardens. In taſte and ſmell it is leſs acrid and more grateful than the common thyme. Its ſmell, in particular, is remarkably different, approaching to that of lemons. It gives over its flavour in diſtillation both with water and ſpirit. With the former an elegant eſſential oil ariſes. The diſtilled ſpirit is an agreeable aromatic cordial liquor, not inferior to any thing of this kind.

TILIÆ *flores*: *Tiliæ fœminæ folio majore C. B. Tiliæ Europææ Lin.* The lime or linden tree; its flowers [*L. E.*]

The lime tree has been much valued on account of its quick growth and pleaſant ſhade; it flowers in July, and loſes its leaves ſoon after. The flowers are made uſe of chiefly on account of their agreeable flavour, which water extracts from them by infuſion, and elevates in diſtillation. Among the writers on the materia medica, they have the character of an antiepileptic, and a ſpecific in all kind of ſpaſms and pains. Frederick Hoffman relates, that he knew a chronical epilepſy cured by the uſe of an infuſion of theſe flowers drunk as tea.

THYMELÆÆ *baccæ*: *Thymelææ foliis lini C. B. Daphnes Gnidii Lin.* Spurge flax; its berries, called *grana cnidia*.

TITHYMALI *radix. Euphorbiæ Paraliadis Lin.* Spurge; the root.

Several ſorts of ſpurge are mentioned in catalogues of the materia medica. The Edinburgh college, in a former edition, retained two (ESULA MAJOR, *tithymalus paluſtris fruticoſus C. B.* German ſpurge; and ESULA MINOR, *tithymalus foliis pini C. B.* pine-ſpurge): both the Edinburgh and London colleges have now rejected them all.

The ſpurges and grana cnidia are extremely acrid, irritating cathartics, and operate with ſo much violence as to be altogether unfit for internal uſe.

TINCAR, vide BORAX.

TORMENTILLÆ *radix: Tormentillæ ſylveſtris C. B. Tormentillæ erectæ Lin.* Tormentil, or ſeptfoil; the root [*L. E.*]

Tormentil is found wild in woods and on commons. It has long ſlender ſtalks, with uſually ſeven long narrow leaves at a joint; the root is for the moſt part crooked and knotty, of a blackiſh colour on the outſide, and reddiſh within. This root has an auſtere ſtyptic taſte, accompanied with a ſlight kind of aromatic flavour. It is one of the moſt agreeable and efficacious of the vegetable aſtringents, and is employed with good ſucceſs in all caſes where medicines of this claſs are proper. It is more uſed, both in extemporaneous preſcription and in officinal compoſition, than any of the other ſtrong vegetable aſtringents. It is an ingredient in the two compound powders of bole [*L.*] the two powders and electary of ſcordium [*L.*] the compound white decoction [*E.*] and Japonic confection [*E.*] A tincture made from it with rectified ſpirit poſſeſſes the whole aſtringency and flavour of the root, and loſes nothing of either in inſpiſſation.

TRAGACANTHA, vide GUMMI TRAGACANTHÆ.

TRICHOMANIS *folia: Trichomanis ſive polytrichi officinarum C. B. Aſplenii Trichomanis Lin.* Engliſh maidenhair; the leaves [*L. E.*]

This is one of the herbs called, from the ſmallneſs of their ſtalks, capillary. It is found wild in different parts of England, upon old walls, and in ſhady places. The leaves have a mucilaginous, ſweetiſh, ſubaſtringent taſte, without any particular flavour; they are eſteemed uſeful in diſorders of the breaſt proceeding from a thickneſs and acrimony of the juices; and are likewiſe ſuppoſed to promote the expectoration of tough phlegm, and to open obſtructions of the viſcera. They are uſually directed in infuſion or decoction, with the addition of a little liquorice. A ſyrup prepared from them has frequently ſupplied the place of that made from the adianthum verum: ſome have ſubſtituted a ſtill cheaper ingredient, and perhaps much to the diſadvantage of the medicine; both the maiden-hairs yielding little more than a mucilaginous juice, greatly reſembling the ſubſtitute made uſe of. The ſyrup brought from abroad has an admixture of orange flower water.

TRIFOLII PALUDOSI *folia: Trifolii paluſtris C. B. Menyanthis trifoliatæ Lin.* Marſh trefoil, or buck beans; the leaves [*L. E.*]

This plant grows wild in moiſt marſhy places; it has three oval leaves, ſtanding together upon one pedicle which iſſues from the root; their taſte is very bitter, and ſomewhat nauſeous. Marſh trefoil is an efficacious aperient and deobſtruent, promotes the fluid ſecretions, and, if liberally taken, gently looſens the belly. It has gained great reputation in ſcorbutic and ſcrophulous diſorders: and its good effects in theſe caſes have been warranted by experience. Inveterate cutaneous diſeaſes have been removed by an infuſion of the leaves, drunk to the quantity of a pint a day, at proper intervals, and continued ſome weeks. Boerhaave relates, that he was relieved of the gout by drinking the juice mixed with whey.

TRISSAGO, v. CHAMÆDRYS.

TRITICI *farina, amylum, furfur: Tritici vulgaris glumas triturando deponentis J. B.* Wheat; the meal or flour, and ſtarch [*L. E.*] (prepared from the meal by maceration in freſh quantities of water) and bran [*E.*]

Wheat, a common article of our food, is more glutinous and nutritious than moſt other kinds of grain. The flour, or the ſtarch, prepared from it, forms with water a ſoft viſcid ſubſtance, which has been taken with good ſucceſs in diarrhœas and dyſenteries. Starch is an ingredient in the compound powder of gum tragacanth and the white pectoral troches [*L.*] and gives name to a lohoch [*E.*]

Bran contains, beſides the huſks, or ſhells of the wheat, a portion of its farinaceous matter. This is leſs glutinous than the finer flour, and is ſuppoſed to have a detergent quality. Infuſions of bran are not unfrequently employed in this intention externally, and ſometimes likewiſe taken inwardly.

BREAD, carefully toaſted, and infuſed, or lightly boiled in water, imparts a deep colour, and a ſufficiently agreeable reſtringent taſte. This liquor, taken as common drink, has done good ſervice in a weak lax ſtate of the ſtomach and inteſtines: and in bilious vomiting and purging, or the cholera morbus: examples are related in the Edinburgh eſſays of ſeveral caſes of this kind cured by it, without the uſe of any other medicine.

TUNICA, vide CARYOPHYLLUS HORTENSIS.

TURPETHUM, *ſive Turbith* [*E.*] Turbith; the cortical part of the root of an Indian convolvulus, brought to us in oblong pieces, of a brown or aſh colour on the outſide, and whitiſh within. The beſt is ponderous, not wrinkled, eaſy to break, and diſcovers a large quantity of reſinous matter to the eye. Its taſte is at firſt ſweetiſh; chewed for a little time, it becomes acrid, pungent, and nauſeous. This root is a cathartic, not of the ſafeſt or moſt certain kind. The reſinous matter, in which its virtue reſides, appears to be very unequally diſtributed, inſomuch that ſome pieces, taken from a ſcruple to a dram, purge violently; while others, in larger doſes, have ſcarce any effect at all. An extract made from the root is more uniform in ſtrength, though not ſuperior, or equal to purgatives more common in the ſhops.

TUSSILAGINIS *ſive farfaræ folia, flores: Tuſſilaginis vulgaris C. B.* Coltsfoot: the leaves and flowers [*E.*]

This grows wild in watery places, producing yellow flowers in February and March. Theſe ſoon fall off, and are ſucceeded by large roundiſh leaves, hairy underneath. Their taſte is herbaceous, ſomewhat glutinous and ſubacrid. Tuſſilago ſtands recommended in coughs, and other diſorders of the breaſt and lungs; the flowers are an ingredient in the pectoral decoction of the Edinburgh pharmacopœia.

TUTIA [*L. E.*] Tutty; an impure ſublimate of zinc, or an argillaceous ſubſtance impregnated therewith, formed into tubulous pieces like the bark of a tree. It is moderately hard and ponderous, of a browniſh colour, and full of ſmall protuberances on the outſide, ſmooth and yellowiſh within. Some pieces have a blueiſh caſt, from minute globules of zinc being thrown up by the heat in its metallic form. Tutty is celebrated as an ophthalmic, and frequently employed as ſuch in unguents and collyria. It gives name to an officinal ophthalmic ointment [*L. E.*] See ZINCUM.

VALERIANÆ HORTENSIS MAJORIS *radix: Valerianæ majoris odorata radice J. B.* The great garden valerian; its roots [*E.*]

This is an oblong wrinkled root, with ſeveral fibres at the bottom, of a browniſh or aſh colour on the outſide, and whitiſh within; of an aromatic ſmell and taſte, approaching to nard. It is deemed leſs efficacious as a medicine than the following.

VALERIANÆ SILVESTRIS *radix: Valerianæ ſylveſtris majoris montanæ C. B. Valerianæ ſylveſtris majoris foliis anguſtioribus. Moriſon. plant umbelliſ.* Wild valerian (the narrow-leaved ſort, growing on open, dry, mountainous places) its root [*L. E.*]

This root conſiſts of a number of ſtrings or fibres matted together, iſſuing from one common head; of a whitiſh or pale browniſh colour: its ſmell is ſtrong, like a mixture of aromatics with fetids; the taſte unpleaſantly warm, bitteriſh, and ſubacrid. There is another wild valerian, with broader leaves, of a deeper and ſhining green colour, met with in watery places. Both ſorts have hitherto been uſed indiſcriminately, and Linnæus has joined them into one ſpecies, under the name of *valeriana foliis omnibus pinnatis.* Our college have reſtrained the ſhops to the former, which is conſiderably the ſtronger, and loſes much of its quality if tranſplanted into ſuch ſoils as the other naturally delights in. The roots produced in low watery grounds, have a remarkably faint ſmell in compariſon of the others, and ſometimes ſcarce any at all. Wild valerian is a medicine of great uſe in nervous diſorders, and is particularly ſerviceable in epilepſies proceeding from a debility of the nervous ſyſtem. It was firſt brought into eſteem in theſe caſes by Fabius Columna, who by taking the powdered root, in the doſe of half a ſpoonful, was cured of an inveterate epilepſy after many other medicines had been tried in vain. Repeated experience has ſince confirmed its efficacy in this diſorder; and the preſent practice lays conſiderable ſtreſs upon it. The common doſe is from a ſcruple to a dram; in infuſion from one to two drams. Its unpleaſant flavour is moſt effectually concealed by a ſuitable addition of mace.

A tincture of valerian in proof ſpirit and in volatile ſpirit are kept in the ſhops [*L.*] This root gives name alſo to a compound water [*E.*] and is an ingredient in the cephalic tincture [*E.*] epileptic powder [*E.*] mithridate and theriaca [*L.*]

VERATRUM, vide HELLEBORUS ALBUS.

VERBASCUM, vide TAPSUS BARBATUS.

VERONICA FŒMINA, vide ELATINE.

VERONICÆ MARIS, *ſeu Betonicæ Pauli folia: Veronicæ maris ſupinæ et vulgatiſſimæ C. B.* Male ſpeedwell; the leaves [*E.*]

This is one of the veronicæ which produce their flowers in cluſters at the joints of the ſtalks. It is a rough procumbent plant, not unfrequently met with on dry commons, and in ſandy grounds. In taſte, ſmell, and medical virtues, it is ſimilar to the betonica: though the veronica is commonly ſuppoſed to have more of an aperient and pectoral virtue, and betony to be rather nervine and cephalic. Hoffman and Joh. Francus have written expreſs treatiſes on this plant, recommending infuſions of it, drunk in the form of tea, as very ſalubrious in many diſorders, particularly thoſe of the breaſt.

VINCETOXICI, *Aſclepiadis, ſeu Hirundinariæ radix: Aſclepiadis flore albo C. B.* Swallow-wort, or tame poiſon; the root [*E.*]

This is a native of the warmer climates: it is ſometimes met with in our gardens, but rarely perfects its ſeeds. It is reckoned by botaniſts, a ſpecies of apocynum, or dogſbane; from all the poiſonous ſorts of which it may be diſtinguiſhed, by yielding a limpid juice, whilſt that of the others is milky. The root has a ſtrong ſmell, eſpecially when freſh, approaching to that of valerian, or nard; the taſte is at firſt ſweetiſh and aromatic, but ſoon becomes bitteriſh, ſubacrid, and nauſeous. This root is eſteemed ſudorific, diuretic, and emmenagogue, and frequently employed by the French and German Phyſicians as an alexipharmic, ſometimes as a ſuccedaneum to contrayerva; whence it has received the name of contrayerva Germanorum. Among us it is very rarely made uſe of: it appears, from its ſenſible qualities, to be a medicine of much the ſame kind with valerian, which is indiſputably preferable to it.

VINUM. Wine; the fermented juice of the grape. Among the great variety of wines in common uſe among us, five are employed in the ſhops as menſtrua for medicinal ſimples.

Vinum album [*L.*] *vinum album Hiſpanicum* [*E.*] Mountain.

Vinum album Gallicum [*E.*] French white wine.

Vinum Canarinum [*L. E.*] Canary or ſack.

Vinum Rhenanum [*L. E.*] Rheniſh.

Vinum rubrum [*L.*] Red port.

The uſes of theſe liquors as menſtrua and vehicles of the virtues of other medicines, will be given hereafter; in this place we ſhall conſider only their effects on the human body. Theſe are, to chear the ſpirits, warm the habit, promote perſpiration, render the veſſels full and turgid, raiſe the pulſe, and quicken the circulation. The effects of the full-bodied wines, are much more durable than thoſe of the thinner; all ſweet wines, as Canary, abound with a glutinous nutritious ſubſtance; whilſt the others are not nutrimental, or only accidentally ſo, by ſtrengthening the organs employed in digeſtion. Sweet wines in general do not paſs off freely by urine, and heat the conſtitution more than an equal quantity of any other, though containing full as much ſpirit; red port, and moſt of the red wines, have an aſtringent quality, by which they ſtrengthen the tone of the ſtomach and inteſtines, and thus prove ſerviceable for reſtraining immoderate ſecretions: thoſe which are of an acid nature, as Rheniſh, paſs freely by the kidneys, and gently looſen the belly: it is ſuppoſed that theſe laſt exaſperate or occaſion gouty and calculous diſorders; and that new wines of every kind have this effect.

VIOLÆ *folia, flores: Violæ martiæ purpureæ flore ſimplici odoro C. B. Violæ odoratæ Lin.* The ſingle March violet; its flowers [*L. E.*] and leaves [*E.*]

This is often found wild in hedges and ſhady places, and flowers in March; the ſhops are generally ſupplied from gardens. In our markets, we meet with the flowers of a different ſpecies, named by botaniſts *viola martia major hirſuta, inodora*: theſe may be diſtinguiſhed from the foregoing by their being larger, of a pale colour, and of no ſmell. The officinal flowers have a very pleaſant ſmell, and a deep purpliſh blue colour, denominated from them violet. They impart their colour and flavour to aqueous liquors: a ſyrup made from the infuſion has long maintained a place in the ſhops, and proves an agreeable and uſeful laxative for children.

* VIOLÆ *Tricoloris folia Lin.* Panſies or heartſeaſe: This plant has been lately recommended by Dr. Strack, a German phyſician, as a ſpecific in the *cruſta lactea* of children. He directs a handful of the freſh, or half a dram of the dried leaves to be boiled in half a pint of milk, which is to be ſtrained for uſe. This doſe is repeated morning and evening. He obſerves, that when it has been adminiſtered eight days, the eruption uſually increaſes conſiderably, and the patient's urine acquires a ſmell like that of cats. When the medicine has been taken a fortnight, the ſcurf begins to fall off in large ſcales, leaving the ſkin clean. The remedy is to be perſiſted in, till the ſkin has reſumed its natural appearance, and the urine ceaſes to have any particular ſmell.

VIPERA [*L. E.*] The viper, or adder, is one of the viviparous reptiles, without feet, about an inch in thickneſs, and twenty or thirty in length. The poiſon of this ſerpent is confined to its mouth. At the baſis of the fangs, or long teeth with which it wounds, is lodged a little bag containing the poiſonous liquid; a very minute portion of which, mixed immediately with the blood, proves fatal. Our viper-catchers are ſaid to prevent the miſchiefs otherwiſe following from the bite, by rubbing oil olive warm on the part. The fleſh of the viper is perfectly innocent; and ſtrongly recommended as a medicine of extraordinary ſervice in ſcrophulous, leprous, and other obſtinate chronical diſorders: its virtues however, in theſe caſes, are probably too much exaggerated. The viper is doubtleſs an high nutritious food; and hence in ſome kinds of weakneſſes, and emaciated habits, is not undeſervedly looked upon as a good reſtorative. To anſwer any valuable purpoſes, freſh vigorous vipers (not ſuch as have been long kept alive after they are caught) ſhould be liberally uſed as food. The wines and tinctures of them can ſcarce be ſuppoſed to receive any conſiderable virtue from the animal; the dry fleſh brought us from abroad, is entirely inſignificant.

In the ſhops, a broth is directed to be prepared from freſh vipers, and a vinous tincture from dried ones [*L.*]: the dried fleſh is alſo an ingredient in theriaca, and the fat in the ointment of tutty [*L.*] this fat being ſuppoſed peculiarly uſeful in diſorders of the eyes, for which that ointment is deſigned.

VIRGÆ AUREÆ *folia: Virgæ aureæ anguſtifoliæ, minus ſerratæ C. B. Solidaginis Virgæ aureæ Lin.* Golden rod; the leaves [*E.*]

This is found wild on heaths and in woods, producing ſpikes of yellow flowers in Auguſt. The leaves have a moderately aſtringent bitter taſte, and hence prove ſerviceable in debility and laxity of the viſcera, and diſorders proceeding from that cauſe.

VISCI QUERNI *lignum folia: Viſci baccis albis C. B. Viſci albi Lin.* Miſſeltoe; the wood and leaves [*E.*]

This is a buſhy plant, growing on the trunk and branches of different trees. That met with on the oak is generally preferred, perhaps on account of its being the moſt rare. It may, however, be propagated by art on any trees, by rubbing the berries againſt the bark. This office has hitherto been performed by the thruſh (who feeds on the berries in the winter) in clearing his bill from the ſeeds that ſtick about it. This plant was held in veneration by the ſuperſtition of former ages: it was hung about the neck to prevent witchcraft, and taken internally to expel poiſons. Of late it has been celebrated as a ſpecific in epilepſies, palſies, &c. virtues, to which it were greatly to be wiſhed that experience gave any countenance.

VITEX, vide AGNUS CASTUS.

VITIS VINIFERA. The vine tree. The leaves of this tree were formerly celebrated as aſtringents, but have for a long time been entirely diſregarded: their taſte is herbaceous, with only a ſlight roughneſs. The trunk of the tree, wounded in the ſpring, yields a clear, limpid, watery juice: this tear of the vine has been accounted excellent for ſore eyes; and by ſome recommended likewiſe in ardent and malignant fevers, and as a diuretic. The flowers have a pleaſant ſmell, which water elevates from them in diſtillation; along with the water, a ſmall portion of an elegant eſſential oil is ſaid to ariſe, poſſeſſing in great perfection the fragrance of the flowers. The unripe fruit is of a very harſh, rough, ſour taſte: its expreſſed juice, called verjuice, *omphacium, agreſta* [*E.*] was of great eſteem among the ancients, and ſtill continues ſo in ſome places, as a cooling aſtringent medicine. A rob and ſyrup were formerly prepared from it. The ripe fruit or grapes, of which there are ſeveral kinds, properly cured and dried, are the raiſins and currants of the ſhops; the juice by fermentation affords wine, vinegar, and tartar; of all which in their places.

VITRIOLUM. Vitriol is a ſaline cryſtalline concrete, compoſed of metal, and an acid ſimilar to thoſe of ſulphur and alum. There are but three metallic bodies, which this acid is capable of perfectly diſſolving or being united with into a cryſtalline appearance, zinc, copper, and iron. With the firſt it forms a white, with the ſecond a blue, and with the third a green ſalt.

VITRIOLUM ALBUM [*L. E.*] White vitriol, or vitriol of zinc; found in the mines of Goſlar, ſometimes in tranſparent pieces, but more commonly in form of white efflореſcences, which are diſſolved in water, and afterwards reduced by evaporation and cryſtallization into large maſſes. We rarely meet with this ſort of vitriol pure; after the zinc, which is its proper baſis, has been revived by inflammable fluxes, there remains a ſubſtance which is attracted by the magnet, and diſcovers itſelf, on other trials alſo, to be iron: a ſolution of the vitriol depoſits, on ſtanding, an ochery ſediment, which generally gives a blue tincture to volatile alkalies, and hence appears to contain copper. White vitriol is ſometimes given from five or ſix grains to half a dram, as an emetic; it operates very quickly, and if pure, without violence. Externally, it is employed as an ophthalmic, and often made the baſis of collyria, both in extemporaneous preſcription, and in diſpenſatories. A ſolution of it is directed in this intention both by the Edinburgh and London colleges.

VITRIOLUM CŒRULEUM [*L. E.*] Blue vitriol, or vitriol of copper, falſely called Roman vitriol. Greateſt part of the blue vitriol at preſent met with in the ſhops, is ſaid to he artificially prepared by uniting copper with the vitriolic acid. This ſalt has a highly auſtere, acrid, and very nauſeous taſte. It is a ſtrong emetic, too violent to be exhibited with any tolerable degree of ſafety. Its principal uſe is externally as an eſcharotic; and for ſtopping hæmorrhages, which it effects by coagulating the blood, and contracting the mouths of the veſſels. It gives name to an officinal water for this intention.

VITRIOLUM VIRIDE [*L.E.*] Green vitriol, or vitriol of iron, commonly called copperas; the Roman vitriol of the Italian and other foreign writers. This is prepared in large quantity at Deptford, by diſſolving iron in the acid liquor, which runs from certain ſulphureous pyritæ, expoſed for a length of time to the air. When pure, it is ſimilar in quality to the officinal *ſal martis.*

The green and blue vitriols (as well as the white) are in many places found native in the earth; though uſually in this ſtate, neither ſort is free from an admixture of the other: hence vitriols are met with of all the intermediate colours betwixt the graſs green of the one, and the ſapphire blue of the other. The acid of theſe ſalts has the greateſt affinity with zinc, next to this with iron, and with copper the leaſt of all. Hence, ſolutions of white vitriol depoſit, on ſtanding, greateſt part of the irony and cupreous matter which they contain, and if ſome freſh zinc be added, the whole. In like manner, upon adding bright poliſhed iron to ſolutions of green vitriol, if it hold any cupreous matter, this will be thrown down. By theſe means the white and green vitriols may be purified from other metallic bodies.

ULMARIÆ, *ſeu Reginæ prati folia, flores: Ulmariæ barbæ cupri floribus compactis C. B. Spirææ Ulmariæ Lin.* Meadow-ſweet, or queen of the meadows; the leaves and flowers [*E.*]

This herb is frequent in moiſt meadows, and about the ſides of rivers. It flowers in the beginning of June, and continues in flower a conſiderable time. The flowers have a very pleaſant flavour, which water extracts from them by infuſion, and elevates in diſtillation. The leaves are herbaceous.

URTICÆ MAJORIS VULGARIS *folia, ſemen: Urticæ racemiferæ majoris perennis Raii.* Stinging nettle; the leaves and ſeeds [*E.*]

UVÆ PASSÆ [*L.*] *majores* [*E.*] Raiſins of the ſun; the dried grapes of the *vitis Damaſcena.*

UVÆ PASSÆ *minores* [*E.*] Currants; the dried grapes of the *vitis Corinthiaca.*

The principal uſe of theſe is as an agreeable ſweet; they impart a very pleaſant flavour both to aqueous and ſpirituous menſtrua. The ſeeds or ſtones are ſuppoſed to give a diſagreeable reliſh, and hence are generally directed to be taken out; but I have not found that they give any taſte at all. The raiſins of the ſun are an ingredient in the pectoral decoction, tincture of ſena, and ſtomachic tincture [*L.*]

WINTERANUS CORTEX [*E.*] Winter's bark; the produce of a tree growing in Jamaica, Barbadoes, &c. called by Sir Hans Sloane *periclymenum rectum, foliis laurinis, cortice acri aromatico.* It was firſt diſcovered on the coaſt of Magellan, by Capt. Winter, in the year 1567. The ſailors then employed the bark as a ſpice, and afterwards found it ſerviceable in the ſcurvy; for which purpoſe it is, at preſent alſo, ſometimes made uſe of in diet-drinks. The true Winter's bark is not often met with in the ſhops, canella alba being generally ſubſtituted for it, and by many reckoned to be the ſame. There is nevertheleſs a conſiderable difference betwixt them in appearance, and a greater in quality: the Winter's bark is in larger pieces, of a more cinnamon-colour, than the canella; and taſtes much warmer and more pungent.

ZEDOARIA [*L. E.*] Zedoary; the root of an Indian plant, brought over in oblong pieces about the thickneſs of the finger, or in roundiſh ones about an inch in diameter. Both ſorts have an agreeeble fragrant ſmell, and a warm, bitteriſh aromatic taſte.

In diſtillation with water, it yields an eſſential oil, poſſeſſing the ſmell and flavour of the zedoary in an eminent degree; the remaining decoction is almoſt ſimply bitter. Spirit likewiſe brings over ſome ſmall ſhare of its flavour; nevertheleſs the ſpirituous extract is conſiderably more grateful than the zedoary itſelf. An extract made from it with proof ſpirit (which is inferior to that prepared with rectified ſpirit) is an ingredient in the confectio cardiaca [*L.*] the root in ſubſtance enters the confectio Paulina, mithridate, and theriaca [*L.*]

ZIBETHUM [*E.*] Civet; a ſoft unctuous ſubſtance, of a white, brown, or blackiſh colour, brought from the Brazils, the coaſt of Guinea, and the Eaſt Indies. It is met with in certain bags, ſituated in the lower part of the belly of an animal ſaid to be of the cat kind. The chief uſe of this drug is in perfumes. It is rarely, if ever, employed for any medicinal purpoſes.

ZINCUM. Zinc; a metal, differing from all the other bodies of that claſs, in being inflammable *per ſe,* ſublimable into flowers which afterwards remain fixed in the ſtrongeſt fire, ſoluble in every acid, not miſcible in fuſion with ſulphur, changing copper into a yellow metal, braſs. Several productions of this metal, though not generally known to be ſuch, are kept in the ſhops; as its rich ore calamine, the white vitriol, the pure white flowers of zinc called pompholyx, and the more impure compound tutty. The preparations of zinc are employed principally in external applications as ophthalmics. The flowers levigated into an impalpable powder, form with oily ſubſtances an uſeful unguent, and with roſe-water, and the like, elegant collyria, for defluxions of thin ſharp humours upon the eyes: they are moderately aſtringent; and act, if the levigation have been duly performed, without acrimony or irritation. Taken internally, they prove emetic.

ZINGIBER [*L. E.*] *Amomum Zingiber Lin.* Ginger; a root brought from China and the Eaſt and Weſt Indies; of a fragrant ſmell, and a hot, biting, aromatic taſte. Rectified ſpirit extracts its virtues by infuſion, in much greater perfection than aqueous liquors. The latter elevate its whole flavour in diſtillation, the former little or nothing. Ginger is a very uſeful ſpice, in cold flatulent cholics, and in laxity and debility of the inteſtines. It does not heat ſo much as thoſe of the pepper kind, but its effects are more durable. It gives name to an officinal ſyrup [*L. E.*] and enters a great number of the compoſitions.

General titles including ſeveral ſimples.

The five opening roots :	Smallage, Aſparagus, Fennel, Parſley, Butchers broom
The five emollient herbs :	Marſhmallows, Mallows, Mercury, Pellitory of the wall, Violets.
The four cordial flowers :	Borage, Bugloſs, Roſes, Violets.
The four greater hot ſeeds :	Aniſe, Caraway, Cummin, Fennel.
The four leſſer hot ſeeds :	Biſhopſweed, Stone parſley, Smallage, Wild carrot.
The four greater cold ſeeds :	Water melons, Cucumbers, Gourds, Melons.

The four leſſer cold ſeeds:
Succory,
Endive,
Lettuce,
Purſlane.

The four capillary herbs:
Maidenhair,
Engliſh maidenhair,
Wall rue,
Ceterach.

The four carminative flowers:
Camomile,
Feverfew,
Dill,
Melilot.

The ſimples of each of the above claſſes have been often employed together, under the reſpective general appellations. This practice has entirely ceaſed among us; and accordingly theſe denominations are now expunged both from the London and Edinburgh pharmacopœias, though ſtill retained in foreign ones.

General rules for the collection and preſervation of ſimples.

ROOTS.

ANNUAL roots are to be taken up before they ſhoot out ſtalks or flowers: biennial ones, chiefly in the autumn of the ſame year in which the ſeeds were ſown: the perennial, when the leaves fall off, and therefore generally in the autumn. Being waſhed clean from dirt, and freed from the rotten and decayed fibres, they are to be hung up in a [warm] ſhady, airy place, till ſufficiently dried. The thicker roots require to be ſlit longitudinally, or cut tranſverſely into thin ſlices. Such roots as loſe their virtues by exſiccation [or are deſired to be preſerved in a freſh ſtate, for the greater conveniency of their uſe in certain forms] are to be kept buried in dry ſand [*E.*]

THERE are two ſeaſons, in which the biennial and perennial roots are reckoned the moſt vigorous, the autumn and ſpring; or rather the time when the ſtalks or leaves have fallen off, and that in which the vegetation is juſt going to begin again, or ſoon after it has begun; which times are found to differ conſiderably in different plants,

The college of Edinburgh, in the two firſt editions of their pharmacopœia, directed them to be dug in the ſpring, after the leaves were formed; in the third edition, the autumn is preferred, and this rule is continued in the ſucceeding ones. The generality of roots appear indeed to be moſt efficacious in the ſpring: but as at this time they are alſo the moſt juicy, and conſequently ſhrivel much in drying, and are rather more difficultly preſerved, it is commonly thought moſt adviſable to take them up in autumn. No rule however can be given, that ſhall obtain univerſally. Arum root is taken even in the middle of ſummer, without ſuſpicion of its being leſs active than at other ſeaſons; while angelica root is inert during the ſummer, in compariſon of what it was in the autumn, ſpring, or winter.

Herbs and Leaves.

Herbs are to be gathered when the leaves have come to their full growth, before the flowers unfold; but of ſome plants the flowery tops are preferred. They are to be dried in the ſame manner as roots [*E.*]

For the gathering of leaves, there cannot perhaps be any univerſal rule, any more than for roots; for though moſt herbs appear to be in their greateſt vigour about the time of their flowering, or a little before, there are ſome in which the medicinal parts are more abundant at an earlier period.

Thus mallow and marſhmallow leaves are moſt mucilaginous when young, and by the time of flowering approach more to a woody nature. A difference of the ſame kind is more remarkable in the leaves of certain trees and ſhrubs: the young buds, or rudiments of the leaves, of the black poplar tree, have a ſtrong fragrant ſmell, approaching to that of ſtorax, but by the time that the leaves have come to their full growth, their fragrance is exhauſted.

Herbs are directed by moſt of the pharmaceutic writers to be dried in the ſhade; a rule which appears to be very juſt, though it has ſometimes been miſunderſtood. They are not to be excluded from the ſun's *heat*, but from the ſtrong action of the ſolar *light*, by which laſt their colours are very liable to be altered or deſtroyed, much more ſo than thoſe of roots. Slow drying of them in a cool place is far from being of any advantage. Both their colours and virtues are preſerved in greateſt perfection, when they are dried haſtily, by a heat of common fire as great as that which the ſun can impart: the juicy ones in particular require to be dried by heat, being otherwiſe ſubject to turn black. Odoriferous herbs, dried by fire till they become friable, diſcover indeed, in this arid ſtate, very little ſmell; not that the odorous matter is diſſipated; but on account of its not being communicated from the perfectly dry ſubject, to dry air; for as ſoon as a watery vehicle is ſupplied, whether by infuſing the plant in water, or by expoſing it for a little time to a moiſt air, the odorous parts begin to be extracted by virtue of the aqueous moiſture, and diſcover themſelves in their full force.

Of the uſe of heat in the drying of plants, we have an inſtance in the curation of tea among the Chineſe. According to the accounts of travellers, the leaves, as ſoon as gathered, are brought into an apartment furniſhed with a number of little furnaces or ſtoves, each of which is covered with a clean ſmooth iron plate. The leaves are ſpread upon the plates, and kept rolling with the hands till they begin to curl up about the edges; they are then immediately ſwept off on tables, on which one perſon continues to roll them, while another fans them that they may cool haſtily: this proceſs is repeated two or three times, or oftener, according as the leaves are diſpoſed to unbend on ſtanding.

FLOWERS.

FLOWERS are to be gathered when moderately expanded, on a clear dry day, before noon. Red roſes are taken before they open, and the white heels clipt off and thrown away [*E.*]

THE quick drying, before recommended for the leaves of plants, is more particularly proper for flowers; in moſt of which both the colour and ſmell are more periſhable than in leaves, and more ſubject to be impaired by ſlow exſiccation. Of the flowers which come freſh into the apothecaries' hands, the only ones employed dry in the London pharmacopœia, are red roſes; and theſe, in all the compoſitions in which they are uſed in a dry ſtate, are expreſsly ordered to be dried haſtily, (*celeriter areſactæ.*) One of the moſt valuable aromatics of European growth, ſaffron, is a part of a flower, dried on paper on a kind of kiln, with a heat ſufficient to make it ſweat, with care only not to endanger the ſcorching of it.

It may here be obſerved, that the virtues of flowers are confined to different parts of the flower in different plants. Saffron is a ſingular production, growing at the end of the ſtile or piſtil: the active part of camomile flowers is the yellow diſk, or button in the middle; that of lilies, roſes, clove-july-flowers, violets, and many others, the petala or flower-leaves; while roſemary has little virtue in any of theſe parts, the fragrance admired in the flowers of this plant reſiding chiefly in the cups.

SEEDS and FRUITS.

SEEDS ſhould be collected when ripe and beginning to grow dry, before they fall off ſpontaneouſly. Fruits alſo are to be gathered when ripe, unleſs they are ordered to be otherwiſe [*E.*]

OF the fruits whoſe collection comes under the notice of the apothecary, there are few which are uſed in an unripe ſtate: the principal is the ſloe, whoſe virtue as a mild aſtringent, is greatly diminiſhed by maturation. The fruit of the orange, tree raiſed in our gardens or green-houſes, is ſometimes gathered in a ſtate of much greater immaturity, ſoon after it is formed on the tree, before it has acquired its acid juice; at this time it proves an elegant aromatic bitter, greatly reſembling what are called Curaſſao oranges, which appear to be no other than the ſame fruit gathered at the ſame period, in a warmer climate.

The rule for collecting ſeeds is more general than any of the others, all the officinal ſeeds being in their greateſt perfection at the time of their maturity. As ſeeds contain little watery moiſture, they require no other warmth for drying them than that of the temperate air in autumn. Such as abound with a groſs expreſſible oil, as thoſe commonly called the cold ſeeds, ſhould never be expoſed to any conſiderable heat; for this would haſten the rancidity, which, however carefully kept, they are very liable to contract. Seeds are beſt preſerved in their natural huſks, or coverings, which ſhould be ſeparated only at the time of uſing; the huſk, or cortical part ſerving to defend the ſeed from being injured by the air.

WOODS and BARKS.

THE moſt proper ſeaſon for the felling of woods, or ſhaving off their barks, is generally the winter [*E.*]

The only woods of our own growth, retained in the catalogues of ſimples in our pharmacopœias, are the juniper and box; the former of which is rarely or never kept in the ſhops, or employed in practice; the other is procured from the turner, and it is indifferent at what ſeaſon it has been cut down, being at all times ſufficiently fit for the only uſe it is applied to, the yielding of an empyreumatic oil by diſtillation in a ſtrong fire.

Of the barks of our own growth, the London college has not retained one: in the Edinburgh pharmacopœia there are ſeveral, viz. thoſe of the aſh tree, birch tree, oak, elm, ſloe, wild ſervice, black alder, and elder, which, however, have been ſo rarely uſed in medicine, that the ſeaſons of their greateſt perfection cannot be aſcertained from experience. It may be doubted, whether barks be not generally more replete with medicinal matter in the ſummer and ſpring than in winter. The barks of many trees are, in ſummer, ſo much loaded with reſin and gum, as to burſt ſpontaneouſly, and diſcharge the redundant quantity. It is ſaid that the bark of the oak anſwers beſt for the tanners, at the time of the riſing of the ſap in ſpring; and as its uſe in tanning depends on the ſame aſtringent quality for which it is uſed in medicine, it ſhould ſeem to be fitteſt for medicinal purpoſes alſo in the ſpring. It may be obſerved, likewiſe, that it is in this laſt ſeaſon that barks in general are moſt conveniently peeled off.

ANIMALS and MINERALS.

ANIMALS and minerals are to be choſen in their moſt perfect ſtate, unleſs they are ordered otherwiſe [*E.*]

The animals of the London Pharmacopœia are only millepedes and the viper; to which the Edinburgh adds ſnails, earthworms, and bees. Whatever virtues theſe bodies may have, they are ſuppoſed to be beſt when they have attained to their common full growth. As there are no diſtinctions of maturity or immaturity in the mineral kingdom, the only rule for directing our choice here muſt be, the purity of the ſubjects from any mixture of other bodies. None of them are ever to be uſed in an impure ſtate.

PART III.

Pharmaceutical Preparations.

CHAPTER I.

THE MORE SIMPLE PREPARATIONS.

TERREORUM, aliorumque quæ aqua non diſſolvuntur corporum præparatio. *The preparation of EARTHY and ſuch other pulverable bodies as will not diſſolve in water.*

THESE ſubſtances are firſt to be pulveriſed in a mortar, and then levigated with a little water, upon a hard and ſmooth marble, into an impalpable powder: this is to be dried upon a chalk ſtone, and afterwards ſet by for a few days, in a warm, or, at leaſt, very dry place. *L.*

After this manner are to be prepared,

Ærugo, *verdegris. L.*
Antimonium, *antimony. L. E.*
Chelæ cancrorum, *crabs claws. L. E.*
Corallium, *coral. L. E.*
Creta, *chalk. L. E.*
Lapis bezoar: *bezoar ſtone; which is to be moiſtened in the levigation, with ſpirit of wine inſtead of water. L.*
Lapis calaminaris, *calamine ſtone, previouſly calcined for the uſe of thoſe who make braſs. L.* Where this is not to be had, the mineral may be calcined by *heating three times red-hot, and quenching it as often in water. E.*
Lapis hæmatites, *blood-ſtone. L. E.*
Lapis lazuli. *E.*
Margaritæ, *pearls. L. E.*
Oculi cancrorum, *crabs eyes, ſo called. L. E.*
Oſtreorum teſtæ, *oyſter ſhells, waſhed clean from dirt. L.* Theſe may alſo be prepared by *expoſing them for ſome days to the ſun, and then rubbing them in a marble mortar till they come into a kind of paſte; this is to be again dried in the ſun, and afterwards rubbed into an impalpable powder: the hollow ſhells are preferred* [*E.*] on account of their containing more of the fine white earth, in proportion to the outward rough coat, than the thinner flat ones: the rough matter appears to be largely impregnated with marine ſalt.

Ovorum teſtæ, *egg ſhells, freed by boiling, from the ſkin that adheres to them.* L.

Succinum, *amber.* L. E.

Tutia, *tutty.* L. E.

In preparing antimony, calamine and tutty, particular care ought to be taken to reduce them into the moſt ſubtile powder poſſible. L.

WHERE large quantities of the foregoing powders are to be prepared, it is cuſtomary, inſtead of the ſtone and muller, to employ hand-mills made for this uſe, conſiſting of two ſtones, the uppermoſt of which turns horizontally upon the lower, and has an aperture in the middle, for the conveniency of ſupplying freſh matter, or of returning that which has already paſſed, till it is reduced to a proper degree of fineneſs.

For the levigation of hard bodies, particular care ſhould be taken, whatever kind of inſtruments is made uſe of, that they be of ſufficient hardneſs, otherwiſe they will be abraded by the powders. The hæmatites, a hard iron ore, is moſt conveniently levigated betwixt two iron planes; for if the common levigating ſtones be made uſe of, the preparation, when finiſhed, will contain almoſt as much of foreign matter from the inſtrument as of the hæmatites.

It has been cuſtomary to moiſten ſeveral powders in levigation, with roſe, balm, and other diſtilled waters. Theſe nevertheleſs have no advantage over common water, ſince in the ſubſequent exſiccation they muſt neceſſarily exhale, leaving the medicine poſſeſſed of no other virtue than what might be equally expected from it when prepared with the cheaper element.

Some few ſubſtances indeed are more advantageouſly levigated with ſpirit of wine than with water. Thus bezoar has the green colour, uſually expected in this coſtly preparation, conſiderably improved thereby. A little ſpirit may be added to the other animal ſubſtances, if the weather be very hot, and large quantities of them are prepared at once, to prevent their running into putrefaction; an accident which, in thoſe circumſtances, ſometimes happens when they are levigated with water only. Crabs eyes, which abound with animal gelatinous matter, are particularly liable to this inconvenience.

The caution given before for reducing antimony, calamine and tutty, to the greateſt ſubtilty poſſible, demands particular attention. The tenderneſs of the parts to which the two laſt are uſually applied, requires them to be perfectly free from any admixture of groſs irritating particles. The firſt, when not thoroughly comminuted, might not only, by its ſharp needle-like ſpicula, wound the ſtomach, but likewiſe anſwers little valuable purpoſe as a medicine, proving either an uſeleſs load upon the viſcera, or at beſt paſſing off without any other ſenſible effect than an increaſe of the groſſer evacuations: whilſt, if reduced to a great degree of fineneſs, it turns out a medicine of conſiderable efficacy.

The moſt ſucceſsful method of obtaining theſe powders of the requiſite tenuity, is, to waſh off the finer parts by means of water, and continue levigating the remainder till the whole becomes fine enough to remain, for ſome time, ſuſpended in the fluid; a proceſs received in the Edinburgh pharmacopœia, and there directed as follows.

Edinb.

A quantity of water is to be poured upon the levigated powder, in a large veſſel, and the veſſel repeatedly ſhaken, that the finer parts of the powder may be diffuſed through the water: the liquor is then to be poured off, and ſet by till the powder ſettles. The groſs part, which the water would not take up, is to be further levigated, and treated in the ſame manner.

After this method are prepared antimony, calamine, tutty, bloodſtone, chalk, and lapis lazuli.

By this method, which is that commonly practiſed in the preparation of colours for the painter, powders may be obtained of any required degree of tenuity; and without the leaſt mixture of the groſs parts, which are always found to remain in them after long continued levigation. All the coarſer matter ſettles at firſt, and the finer powder continues ſuſpended in the water, longer and longer, in proportion to the degree of its fineneſs. The ſame proceſs may likewiſe be advantageouſly applied to other hard pulverable bodies of the mineral kingdom, or artificial preparations of them; provided they be not ſoluble in, or ſpecifically lighter than water. The animal and abſorbent powders, crabs claws, crabs eyes, oyſter ſhells, egg ſhells, chalk, pearl, coral and bezoar, are not well adapted to this treatment; nor indeed do they require it. Theſe ſubſtances are readily ſoluble in acid juices without much comminution. If no acid be contained in the firſt paſſages, they are apt to concrete, with the mucous matter uſually lodged there, into hard indiſſoluble maſſes; the greater degree of fineneſs they are reduced to, the more are they diſpoſed to form ſuch concretions, and enabled to obſtruct the orifices of ſmall veſſels. See page 62.

AXUNGIÆ PORCINÆ, SEVIque OVILLI purificatio.

The purification or trying of hogs lard and mutton ſuet.

Lond.

Chop them into ſmall pieces, and melt them by a gentle heat, with the addition of a little water; then ſtrain them from the membranes.

The uſe of the water is to prevent the fat from burning and turning black; which it does very effectually, though it ſomewhat prolongs the proceſs, and is likewiſe apt to be in part imbibed by the fat. The Edinburgh diſpenſatory directs the fat to be firſt freed from the ſkins, blood veſſels, and fibres, then waſhed in freſh quantities of water till it no longer give the liquor any bloody tinge, afterwards melted, ſtrained, and kept cloſe from the injuries of the air. The ſhops are uſually ſupplied with theſe fats ready prepared.

AXUNGIÆ VIPERINÆ curatio.

The purification of viper's fat.

Lond.

Let the fat, ſeparated from the inteſtines, be melted by a gentle fire, and then preſſed through a thin linen cloth.

The quantity of this fat uſually purified at a time, is ſo ſmall, that the heat may be eaſily regulated ſo as to prevent burning, without the addition of any water.

It is not neceſſary, as Dr. Pemberton obſerves, to be very curious in picking out the fat. It is ſufficient if the heart, liver, and other bloody parts be taken away; for the reſt of the membranes criſp up while the fat melts, ſo as to be eaſily ſeparated by ſtraining.

MELLIS DESPUMATIO.

The deſpumation or clarifying of honey.

Lond. and Edinb.

Let the honey be liquefied in a water-bath (that is, by ſetting the veſſel containing the honey in a veſſel of hot water) and the ſcum which ariſes, taken off.

The intention of this proceſs is to purify the honey from wax, or other droſſy matters that have been united with it by the violence of the preſs in its ſeparation from the comb; and from meal and ſuch like ſubſtances, which are ſometimes fraudulently mingled with it. When the honey is rendered liquid and thin by the heat, theſe lighter matters riſe freely to the ſurface.

SCILLÆ COCTIO.

The baking of ſquills.

Lond.

Let the ſquill (freed from the outer ſkin, and the hard part to which the little fibres adhere) be incloſed in a paſte, made of wheat-flour and water, and baked in an oven, till the paſte become dry, and the ſquill ſoft and tender throughout.

This preparation is as old as the theriaca, and is continued in our diſpenſatory, for no other uſe than making the troches of ſquills, which are one of its principal ingredients. The Edinburgh diſpenſatory having now dropt the theriaca, has dropt alſo the baked ſquills and the troches, and admitted them formerly only in compliance with cuſtom, giving expreſsly the preference to ſquills moderately dried. The intention of baking the root is to abate its acrimony.

SCILLÆ EXSICCATIO.

The drying of ſquills.

Lond.

Let the ſquill, cleared from its outer ſkin, be cut tranſverſely into thin ſlices, and dried with a very gentle heat.

By this method, the ſquill dries much ſooner than when only its ſeveral coats are ſeparated, as has been uſually directed; the internal part being here laid bare, which, in each of the entire coats, is covered with a thin ſkin, that impedes the exhalation of the moiſture. The root loſes, in this proceſs, four-fifths of its original weight; the parts which exhale, appear to be merely watery: hence ſix grains of the dry root are equivalent to half a dram of it when freſh; a circumſtance to be particularly regarded in the exhibition of this medicine. In the preceding editions of our diſpenſatory, a particular caution was given, not to uſe an iron knife for cutting ſquills, but one of wood, ivory, or other bone: the foundation of this caution is ſaid to be not ſo much that the ſquill would receive any ill qualities from the iron; as, that its acrid juice, adhering to the knife, might render a wound received by it extremely painful, or even dangerous.

RHABARBARI et NUCIS MOSCHATÆ torrefactio.

The roaſting of rhubarb and nutmeg.

Lond.

Roaſt them with a gentle heat, until they become eaſily friable.

Nutmegs, in their natural ſtate, are ſo ſoft and unctuous, as ſcarce to be reducible into powder, a form in which they are occaſionally wanted; and rhubarb is very difficultly ſo, unleſs it be thoroughly dry. The torrefaction renders them eaſily pulverable, and as ſoon as this point is obtained, ſhould be immediately diſcontinued, otherwiſe the drugs will be conſiderably injured. This treatment is ſuppoſed by ſome to increaſe the aſtringency of the ſubjects, perhaps on no very good foundation: it undoubtedly renders the rhubarb leſs purgative, and the nutmegs leſs aromatic. Both drugs may be reduced into ſufficiently fine parts for moſt purpoſes, by means of a grater, without any alteration being made in their native quality.

SPONGIÆ USTIO.

The burning of ſponge.

Lond.

Burn the ſponge in a cloſe earthern veſſel, until it becomes black, and eaſily friable: then powder it in a glaſs or marble mortar.

This medicine, now firſt received in the diſpenſatory, has been in uſe for a conſiderable time; and employed againſt ſcrophulous diſorders, and cutaneous foulneſſes, in doſes of a ſcruple and upwards. Its virtues ſeem to depend upon a volatile ſalt, juſt formed, and combined with its own oil: if the ſponge be diſtilled with a ſtronger heat, it yields a large proportion of that ſalt in its proper form. The ſalt is in this preparation ſo far extricated, that if the burnt ſponge be ground in a braſs mortar, it corrodes the metal, ſo as to contract a diſagreeable taint, and ſometimes an emetic quality.

Bees, earthworms, and other animal ſubſtances, have by ſome been prepared in the ſame manner, and recommended in different diſeaſes; but as theſe ſubſtances fall greatly ſhort of ſponge in the quantity of volatile ſalt producible from them by fire, they are probably inferior alſo in medicinal efficacy. Of all the animal matters that have been tried, raw ſilk is the only one which exceeds, or equals ſponge, in the produce of ſalt.

A good deal of addreſs is requiſite for managing this proceſs in perfection. The ſponge ſhould be cut ſmall, and beaten for ſome time in a mortar, that all the ſtony matters may be got out, which compared with the weight of the ſponge when prepared, will ſometimes amount to a conſiderable quantity. The burning ſhould be diſcontinued as ſoon as ever the matter is become thoroughly black. If the quantity put into the veſſel at once be large, the outſide will be ſufficiently burnt before the inſide is affected; and the volatile ſalt of the former will in part eſcape, before that in the latter is begun to be formed. The beſt method of avoiding this inconvenience, ſeems to be, to keep the ſponge continually ſtirring, in ſuch a machine as is uſed for the roaſting of coffee.

CORNU CERVI CALCINATIO.

The calcination of hartſhorn.

Lond.

Burn pieces of hartſhorn in a potter's furnace, till they become perfectly white; then powder and levigate them after the ſame manner as the other earthy bodies.

The intention here is, totally to burn out and expel the oil, ſalt, and other volatile parts; ſo as to leave only a white inſipid animal earth.

For this purpoſe, a ſtrong fire, and the free admiſſion of air, are neceſſary. The potter's furnace is directed merely for the ſake of convenience; where this is not to be had, any common furnace or ſtove may be made to ſerve: on the bottom of the grate ſpread ſome lighted charcoal, and above this lay the horns. The whole will burn vehemently: the vegetable matter is reduced to aſhes; and the horns are burnt to whiteneſs, ſtill retaining their original form, by which they are eaſily diſtinguiſhed from the other: they ought to be ſeparated as ſoon as grown cold, to prevent their imbibing any fixed ſalt from the vegetable aſhes moiſtened by the air. The horns left after the diſtillation of the volatile ſalt and oil of hartshorn, are as proper for this uſe as any other; that proceſs only collecting ſuch parts as are here diſſipated in the air.

Calcined hartſhorn is the pureſt of the animal abſorbent powders; as being perfectly free from any glutinous or oily matter, with which moſt of the others abound. It appears nevertheleſs to be one of the weakeſt in abſorbent power, or the moſt difficult of ſolution in acids.

PULPARUM EXTRACTIO.

The extraction of pulps.

Lond.

Unripe pulpy fruits, and ripe ones if dry, are to be boiled in a ſmall quantity of water until they become ſoft: then preſs out the pulp through a ſtrong hair ſieve, and afterwards boil it down to due conſiſtence, in an earthen veſſel, over a gentle fire; taking care to keep the matter continually ſtirring, to prevent its burning.

The pulp of caſſia fiſtularis is in like manner to be boiled out from the bruiſed pod, and reduced afterwards to a proper conſiſtence, by evaporating the water.

The pulps of fruits that are both ripe and freſh, are to be preſſed out through the ſieve, without any previous boiling.

STYRACIS COLATIO.

The ſtraining of ſtorax.

Lond.

Soften ſtorax calamita in hot water; then preſs it out betwixt warm iron plates; and ſeparate the ſtorax, now purified, from the water.

The ſtorax commonly met with, ſtands greatly in need of purification. It contains a large quantity of woody matter, from which this proceſs effectually frees it, though in other reſpects liable to ſome inconveniencies. The woody ſubſtance in ſome meaſure defends the ſtorax from the action of the preſs, and retains part of it; at the ſame time that the ſtorax is apt to ſuffer a conſiderable diſſipation of its volatile parts, in which its fragrance and principal virtue conſiſt. To prevent as much as poſſible this inconvenience, the operator ought carefully to avoid uſing a greater heat than is abſolutely neceſſary; and as ſoon as the ſtorax is ſufficiently ſoftened, to be expeditious in the ſtraining of it. It has been queried whether this reſin do not communicate ſomewhat to the water it is boiled in; as benzoine, with which it agrees in its other pharmaceutical characters, imparts to water a ſaline matter ſimilar to the ſublimed flowers. On trial it could not be obſerved that any ſaline matter was thus ſeparated from ſtorax, though it impregnated the water conſiderably with its fragrance.

Storax may be excellently purified by means of ſpirit of wine, in which this reſin totally diſſolves, ſo as to paſs through a filtre, the impurities alone being left If the ſtorax be afterwards wanted in a ſolid form, it may be recovered from this ſolution by gently diſtilling off the ſpirit, which will elevate very little of its flavour, or by pouring to it a quantity of water. See chap. vi. ſect. 3.

OPIUM COLATUM, vel EXTRACTUM THEBAICUM.

Strained opium, or the thebaic extract.

Lond.

Take of opium, cut into ſlices, one pound: diſſolve it into the conſiſtence of a pulp, in a pint of boiling water, with care to prevent its burning: and whilſt it remains quite hot, ſtrongly preſs it from the feces through a linen cloth: the ſtrained opium is then to be reduced, by a water-bath or other gentle heat, to its original conſiſtence.

Opium thus ſoftened by a ſmall quantity of water, paſſes the ſtrainer entire, the feces only being left behind. If it were diſſolved in a large quantity of water, its reſinous and gummy parts would be ſeparated from one another.

Where large quantities of opium are purified at once, the inſpiſſation is moſt commodiouſly performed in a water-bath: but ſmall quantities may be very ſafely inſpiſſated, by placing the veſſel immediately over a gentle fire, the matter being kept ſtirring, and the veſſel occaſionally removed from the fire, whenever there is any ſuſpicion of its becoming too hot. The groſſer impurities of the opium are by this proceſs effectually ſeparated; but ſome of its heterogeneous admixtures, conſiſting chiefly of duſt and farinaceous matters, are ſo fine, as partly to paſs along with it through the pores of the ſtrainer when dilated by the preſs; this manifeſtly appears upon boiling the ſtrained opium in water, and afterwards in ſpirit; when a conſiderable quantity of earthy matter will be left, which is not ſoluble in either of thoſe menſtrua.

THE OTHER GUMS, as ammoniacum, galbanum, aſafœtida, and the like, are purified after the ſame manner, only here a larger quantity of water may be made uſe of without injury. If the reſinous part happen to ſubſide, take it out, and reſerve it to be added again towards the end of the inſpiſſation, that it may unite with the reſt into one uniform maſs.

Any gum that melts eaſily, as galbanum, may likewiſe be purified by including it in a bladder, and keeping it in boiling water, until the gum becomes ſoft enough to be preſſed from its impurities through a canvas ſtrainer. [*L.*]

In the ſtraining of all the gums, care ſhould be taken, that the heat be neither too great, nor too long continued; otherwiſe a conſiderable portion of their more active volatile matter will be loſt: an inconvenience which cannot, by any care, be wholly avoided: hence, as the faculty of Paris obſerves, the purer tears, unſtrained, are preferable, for internal uſe, to the ſtrained gums. The method of ſoftening the gum in a bladder by external heat, without the addition of water, appears to be the moſt eligible for all thoſe that will admit of being thus liquefied ſufficiently; both as exhalation is prevented during the liquefaction; and the ſtrained gum returns in cooling to its original conſiſtence, without the further heat which is requiſite in the other method for evaporating the water. Opium is perhaps leſs injured by heat than the reſt of the gums, the virtues of this drug ſeeming to reſide more in its fixed than in the volatile parts: it is nevertheleſs expedient, that the ſmell of the opium, which affords an uſeful mark of its genuineneſs be as much as poſſible preſerved; this, if the quantity of water were large, would be deſtroyed by the long evaporation which would then become neceſſary.

In the Edinburgh diſpenſatory, opium, and the fouler kinds of aloes, are directed to be purified, by diſſolving them in a ſufficient quantity of water with a gentle heat, ſtraining the ſolutions, and evaporating them to the conſiſtence of honey. The other gums are not required to be purified.

It were to be wiſhed that the conſiſtence, to which the ſtrained ſolutions are to be reduced, was determined with more preciſion, particularly in regard to opium, that there might be as little uncertainty as poſſible in its doſe.

MILLEPEDARUM PRÆPARATIO.

Preparation of millepedes.

Lond.

The millepedes are to be incloſed in a thin canvas cloth, and ſuſpended over hot ſpirit of wine, in a cloſe veſſel, till they are killed by the ſteam, and rendered friable.

Edinb.

Let them be included in a proper veſſel, and dried with a very gentle heat.

Both theſe are convenient ways of rendering millepedes pulverable, without endangering any loſs of ſuch virtues as they may poſſeſs.

CHAPTER II.

Subſtances extracted from vegetables by expreſſion.

SECT. I.

Juices.

JUICES are obtained from the ſucculent parts of plants, by including them, after being properly cut, bruiſed, &c in a hair bag, and preſſing them, betwixt wooden cheeks, in the common ſcrew preſs, as long as any liquor drops from them.

THE harder fruits require to be previouſly well beaten or ground; but herbs are to be only moderately bruiſed; for if theſe be over bruiſed, a large quantity of the herbaceous matter will be forced out along with the juice. Hempen or woollen bags are apt to communicate a diſagreeable flavour; the threads of theſe likewiſe ſwell in proportion as they imbibe moiſture, ſo as in great meaſure to prevent the free percolation of the juice.

The fluids thus extracted from ſucculent fruits, both of the acid and ſweet kind, from moſt of the acrid herbs, as ſcurvy-graſs and water creſſes, from the acid herbs, as ſorrel and wood-ſorrel, from the aperient lacteſcent plants, as dandelion and hawkweed, and from ſundry other vegetables, contain great part of the peculiar taſte and virtues of the reſpective ſubjects. The juices, on the other hand, extracted from moſt of the aromatic herbs, as thoſe of mint and the fragrant Turkey balm, commonly called balm of Gilead, have ſcarcely any thing of the flavour of the plants, and ſeem to differ little from decoctions of them, made in water, boiled till the volatile odorous parts have been diſſipated. Many of the odoriferous flowers, as the lily, violet, hyacinth, not only impart nothing of their fragrance to their juice, but have it totally deſtroyed by the previous bruiſing. From want of ſufficient attention to theſe particulars, practitioners have been frequently deceived in the effects of preparations of this claſs: juice of mint has been often preſcribed as a ſtomachic, though it wants thoſe qualities, by which mint itſelf, and its other preparations, operate in that intention.

The juices, thus forcibly preſſed out from plants, differ from thoſe which flow ſpontaneouſly or from inciſions; theſe laſt conſiſting chiefly of ſuch fluids as are not diffuſed through the whole ſubſtance of the vegetable ſubject, but elaborated in diſtinct veſſels, or ſecreted into particular receptacles. From poppy heads, ſlightly wounded, there iſſues a thick milky liquor, which dries by a moderate warmth, into opium; whilſt the juice obtained from them by preſſure is of a dark green colour, and far weaker virtue.

Juices, newly expreſſed, are generally thick, viſcid, and very impure: by colature, a quantity of groſs matter is ſeparated, the juice becomes thinner, limpid, and better fitted for medicinal purpoſes, though as yet not entirely pure. On ſtanding, it becomes again turbid, and apt to run into a fermentative or putrefactive ſtate. Clarification with whites of eggs renders the juices more perfectly fine; but there are few that will bear this treatment without a manifeſt injury to their flavour, taſte, and virtue.

The moſt effectual method of purifying and preſerving theſe liquors, is, to let the ſtrained juices ſtand in a cool place, till they have depoſited their groſſer feces, and then gently paſs them ſeveral times through a fine ſtrainer till perfectly clear; when about one-fortieth part their weight of good ſpirit of wine may be added, and the whole ſuffered to ſtand as before: a freſh ſediment will now be depoſited, from which the liquor is to be poured off, ſtrained again, and put into ſmall bottles that have been waſhed with ſpirit and dried. A little oil is to be poured on the ſurface, ſo as very nearly to fill the bottles, and the mouths cloſed with leather, paper, or ſtopt with ſtraw, as the flaſks in which Florence wine is brought to us: this ſerves to keep out duſt, and ſuffers the air, which in proceſs of time ariſes from all vegetable liquors, to eſcape; which air would otherwiſe endanger the burſting of the glaſſes, or, being imbibed afreſh, render their contents vapid and foul. The bottles are to be kept on the bottom of a good cellar or vault, placed up to the necks in ſand. By this method, juices may be preſerved for a year or two; and ſome for a much longer time.

It has already been obſerved, that there are great differences in juices, in regard to their being accompanied, in the expreſſion, with the virtues of the ſubjects: there are equal differences in regard to their preſerving thoſe virtues, and this independently of the volatility of the active matter, or its diſpoſition to exhale. Even the volatile virtue of ſcurvy-graſs may, by the above method, be preſerved almoſt intire in its juice for a conſiderable time; while the active parts of the juice of the wild cucumber quickly ſeparate and ſettle to the bottom, leaving the fluid inert. Juices of arum root, iris root, bryony root, and ſundry other vegetables, throw off in like manner their medicinal parts to the bottom.

SUCCI SCORBUTICI.

The ſcorbutic juices.

Lond.

Take the juice of
  Garden ſcurvy-graſs, two pints;
  Brooklime,
  Water creſſes, each one pint;
  Seville oranges, a pint and quarter.

Mix them together, let them ſtand till the feces have ſubſided, and then either pour the liquor off clear, or paſs it through a ſtrainer.

Edinb.

Take the juice of
  Garden ſcurvy-graſs,
  Water creſſes, expreſſed from freſh gathered herbs,
  Seville oranges, of each two pounds:
  Spirituous nutmeg water half a pound.

Mix them together; let them ſtand till the feces have ſubſided, and pour off the clear liquor.

Both theſe compoſitions are of conſiderable uſe for the purpoſes expreſſed in the title; the orange juice is an excellent aſſiſtant to the ſcurvy-graſs and other acrid and antiſcorbutics, which, when thus mixed, have been found from experience to produce much better effects than when employed by themſelves. Theſe juices may be taken, from an ounce or two to a quarter of a pint, two or three times a day: they generally increaſe the urinary ſecretion, and ſometimes introduce a laxative habit. Preſerved with the cautions above mentioned, they will keep good for a conſiderable time; though, whatever care be taken, they are found to anſwer better when freſh.

SECT. II.

Expreſſed oils.

EXPRESSED oils are obtained chiefly from certain ſeeds and kernels of fruits, by thoroughly pounding them in a ſtone mortar, or, where the quantities are large, grinding them in mills, and then including them in a canvas bag, which is wrapt in a hair cloth, and ſtrongly preſſed betwixt iron plates. The canvas, if employed alone, would be ſqueezed ſo cloſe to the plates of the preſs, as to prevent the oil from running down: by the interpoſition of the hair cloth, a free paſſage is allowed it.

SUNDRY machines have been contrived, both for grinding the ſubject, and preſſing out the oil, in the way of buſineſs. To facilitate the expreſſion, it is cuſtomary to warm either the plates of the preſs; or the ſubject itſelf after the grinding, by keeping it ſtirring, in a proper veſſel over the fire: the oil, liquefied by the heat, ſeparates more freely and more plentifully. When the oil is deſigned for medicinal purpoſes, this practice is not to be allowed; for heat, eſpecially if its degree be ſufficient to be of any conſiderable advantage for promoting the ſeparation, renders the oil leſs ſoft and palatable, impreſſes a diſagreeable flavour, and increaſes its diſpoſition to grow rancid. Hence the colleges both of London and Edinburgh expreſsly require the operation to be performed without heat.

Nor are the oils to be kept in a warm place after their expreſſion. Expoſed but for a few days to a heat no greater than that of the human body, they loſe their emollient quality, and become highly rancid and acrimonious. Too much care cannot be taken for preventing any tendency to this acrid irritating ſtate, in medicines ſo often uſed for abating immoderate irritation.

So much are theſe oils diſpoſed to this injurious alteration, that they frequently contract an acrimony and rancidity while contained in the original ſubjects. Hence great care is requiſite in the choice of the unctuous ſeeds and kernels, which are often met with very rancid; almonds are particularly liable to inconveniencies of this kind.

Expreſſed oils are prepared for mechanic uſes from ſundry different ſubjects, as nuts, poppy-ſeed, hemp-ſeed, rape-ſeed, and others. Thoſe directed for medicinal purpoſes in the London and Edinburgh pharmacopœias, are,

OLEUM AMYGDALINUM.
Oil of almonds.

OLEUM SEMINUM LINI.
Oil of linſeed.

OLEUM SEMINUM RICINI.
Oil of ricinus.

OLEUM SEMINUM SINAPI.
Oil of muſtard ſeed.

The oil of almonds is prepared from the ſweet and bitter almonds indifferently; the oils obtained from both ſorts being altogether the ſame. Nor are the differences of the other oils very conſiderable, the diſcriminating qualities of the ſubjects not reſiding in the oils that are thus obtained by expreſſion: the oil of muſtard-ſeed is as ſoft, inſipid, and void of pungency, as that of ſweet almonds, the pungency of the muſtard remaining entire in the cake left after the expreſſion. The ſeveral oils differ in ſome of their properties from one another; but in medicinal qualities they appear to be all nearly alike, and agree in one common emollient virtue. They ſoften and relax the ſolids, and obtund acrimonious humours: and thus become ſerviceable, internally, in pains, inflammations, heat of urine, hoarſeneſs, tickling coughs, &c. in glyſters, for lubricating the inteſtines, and promoting the ejection of indurated feces; and in external applications, for tenſion and rigidity of particular parts. Their common doſe is half an ounce: in ſome caſes, they are given to the quantity of three or four ounces. The moſt commodious forms for their exhibition, we ſhall ſee hereafer, in the chapter of Emulſions.

The oils expreſſed from aromatic ſubſtances, differ from the foregoing, in retaining, for the moſt part, an admixture of the aromatic matter of the ſubject. Thus nutmegs and mace yield, upon expreſſion, an oil impregnated with the flavour of the ſpices; and an oil expreſſed from aniſeeds, has a great ſhare of the peculiar ſmell of the ſeeds. A purgative oil alſo is extracted in America from the purgative ſeeds of the *ricinus*. It does not appear that other qualities of vegetables are communicated to their expreſſed oils.

The rinds of the ſeveral varieties of oranges, lemons and citrons, yield by a kind of expreſſion their eſſential oils almoſt pure, and nearly ſimilar to thoſe which are obtained from them by diſtillation. The eſſential oils, in which the fragrance and aromatic warmth of theſe fruits reſide, are contained in numerous little veſicles, which may be diſtinguiſhed by the naked eye, ſpread all over the ſurface of the peel. If the rind be cut in ſlices, and the ſlices ſeparately doubled or bent in different parts, and ſqueezed between the fingers, the veſicles burſt at the bending, and diſcharge the oil in a number of fine ſlender jets. A glaſs plate being ſet upright in a glaſs or porcelain veſſel, and the ſlices ſqueezed againſt the plate, the little jets unite into drops upon the plate, and trickle down into the veſſel beneath. But though this proceſs affords the true native oil, in the ſame ſtate wherein it exiſted in the ſubject, unaltered by fire or other agents, it is not practicable to advantage, unleſs where the fruit is very plentiful; as only a ſmall part of the oil it contains can thus be extracted or collected.

The oil is more perfectly ſeparated by rubbing the rind upon a lump of ſugar. The ſugar, by the inequality of its ſurface, produces the effect of a raſp, in tearing open the oily veſicles: and in proportion as the veſicles are opened, the ſugar imbibes the oil. When the outward part of the lump is ſufficiently moiſtened, it is ſcraped off, and the operation continued on the freſh ſurface. The oil thus combined with the ſugar, is fit for moſt of the uſes, to which it is applied in a fluid ſtate. Indeed the pure eſſential oils, obtained by diſtillation, are often purpoſely mixed with ſugar, to render their uſe the more commodious.

CHAPTER III.

Infuſions in different menſtrua.

SECT. I.

Infuſions and decoctions in water.

WATER, the direct menſtruum of gums and ſalts, extracts readily the gummy and ſaline parts of vegetables. Its action, however, is not limited to theſe; the reſinous and oily principles being, in moſt vegetables, ſo intimately blended with the gummy and ſaline, as to be in great part taken up along with them: ſome of the reſinous cathartics, and moſt of the aromatic herbs, as well as bitters and aſtringents, yield to water greateſt part of their ſmell, taſte, and medicinal virtue. Even of the pure eſſential oils and odorous reſins of vegetables, ſeparated from the other principles, water imbibes a part of the flavour; and by the artificial admixture of gummy or ſaline matter, the whole ſubſtance of the oil or reſin is made diſſoluble in water.

Of pure ſalts, water diſſolves only certain determinate quantities (ſee page 39.) By applying heat, it is generally enabled to take up more than it can do in the cold, and this in proportion to the degree of heat; but as the liquor cools, this additional quantity ſeparates, and the water retains no more than it would have diſſolved without heat. With gummy ſubſtances, on the other hand, it unites unlimitedly, diſſolving more and more of them till it loſes its fluidity: heat expedites the action of the water, but cannot enable it to take up more than it would do, by allowing it longer time, in the cold. The active parts extracted from moſt vegetables by water, and oils and reſins made ſoluble in water by the artificial admixture of gum, partake of this property of pure gums, being diſſoluble without ſaturation.

It has been imagined that vegetables in a freſh ſtate, while their oily, reſinous, and other active parts, are already blended with a watery fluid, would yield their virtues to water more freely and more plentifully, than when their native moiſture has been diſſipated by drying. Experience however ſhews, that dry vegetables, in general, give out more than freſh ones, water ſeeming to have little action upon them in their recent ſtate. If, of two equal quantities of mint, one be infuſed freſh in water, and the other dried, and then infuſed in the like quantity of water for the ſame length of time, the infuſion of the dry herb will be remarkably the ſtronger: and the caſe appears to be the ſame in all the vegetables that have been tried.

In all the preparations deſcribed in this chapter, it is to be underſtood that the ſubjects muſt be moderately and newly dried; unleſs when they are expreſsly ordered to be taken freſh; in which caſe it is to be judged that their virtues are deſtroyed or impaired by drying.

The native colours of many vegetables are communicated to water along with their medicinal matter; many impart a colour different from their own; and others, though of a beautiful and deep colour themſelves, give ſcarcely any to the menſtruum. Of the firſt kind are the yellow and red flowers; of the ſecond, the leaves of moſt plants; of the third, ſome of the blue flowers, as thoſe of cyanus and larkſpur. Acid liquors change the infuſions of moſt flowers, the yellow ones excepted, to a red; and alkalies, both fixt and volatile, to a green.

From animal ſubſtances, water extracts the gelatinous and nutritious parts, whence glues, jellies, broths, &c. and, along with theſe, it takes up principles of more activity, as the acrid matter of cantharides. It diſſolves alſo ſome portion of calcined calcareous earths, both of the animal and of the mineral kingdom, but has no action on any other kind of earthy matter.

ARTICLE I. *Infuſions in cold water.*

INFUSUM CARDUI.

Infuſion of carduus.

Take an ounce of the dried leaves of carduus benedictus, and a pint of common water. Let them ſteep for ſix hours, without heat, and then filter the liquor through paper.

BY this management, only the finer parts of the carduus are extracted, and the infuſion proves an agreeable light bitter; it ſits eaſier on the ſtomach than any other medicine I know of the bitter kind; whereas, by long continued maceration, or by the application of heat, the groſſer and more ungrateful parts are taken up, and the liquor becomes nauſeous, ſo as to provoke vomiting. I have often given the light infuſion, with great benefit, in weakneſſes of the ſtomach, where the common bitters did not agree. It may be flavoured at pleaſure with aromatic materials; inſtead of pure water, a mixture thereof, with ſome grateful diſtilled ſpirituous water, as twelve ounces of common water, and four of the ſpirituous water of orange peel, may be uſed for the menſtruum. The little quantity of ſpirit contained in this compound will not conſiderably vary the diſſolving power of the water.

MANY other vegetables may be advantageouſly treated in the ſame manner. From thoſe which are weak in virtue, rich infuſions may be obtained, by returning the liquor upon freſh quantities of the ſubject; the water loading itſelf more and more with the active parts. Theſe loaded infuſions are doubtleſs applicable to valuable purpoſes in medicine, as they contain, in a ſmall compaſs, the finer, more ſubtile, and active principles of vegetables, in a form readily miſcible with the fluids of the human body.

TINCTURA MENTHÆ.

Tincture of mint.

Edinb.

Take half an ounce of the dry leaves of ſpearmint, and a pint of ſimple mint water. Steep them in a cloſe veſſel, in a warm place, for four hours, and then ſtrain out the tincture.

The diſtilled water of mint is impregnated with as much of the volatile parts of the herb, as water can be made to retain by diſtillation. By infuſion, however, it ſtill takes up more, being equally effectual as a menſtruum with freſh water; hence the tincture proves very rich in the virtue of the mint. This is another uſeful method of obtaining ſtrong infuſions from vegetables, and it may be varied at diſcretion: the diſtilled water of one plant may be employed as a menſtruum for another.

Infusum corticis Peruviani.
Infuſion of Peruvian bark.

Take an ounce of Peruvian bark, reduced into fine powder, and twelve ounces of water. Macerate without heat for twenty-four hours, occaſionally ſhaking the veſſel; then pour off the clear liquor, and paſs it through a fine ſtrainer.

The extraction of the virtues of Peruvian bark, with aqueous liquors, has hitherto been attempted by ſtrong coction. But this drug, contrary to moſt other vegetables, has lately been obſerved to give out more to cold than to boiling water. In boiling, a reſinous matter, containing the aſtringency of the bark, is haſtily melted out by the heat, but not truly diſſolved by the water, and hence, in cooling, it begins to ſeparate, renders the liquor turbid, and at length ſettles to the bottom; whereas, by maceration in cold water, the aſtringent and bitter parts are gradually extracted together, and the former, as well as the latter, are retained by the water in a ſtate of perfect ſolution. The infuſion appears to be one of the beſt preparations of the bark for weak ſtomachs, and may be given in doſes of two or three ounces, in intermitting fevers, and in other diſorders where the corroborating virtues of bark are required.

Aqua picea.
Tar water.

Take of
Tar, two pounds;
Water, one gallon.

Stir them ſtrongly together with a wooden rod; and after ſtanding to ſettle for two days, pour off the water for uſe.

Tar water has been recommended to the world as a certain and ſafe medicine in almoſt all diſeaſes; a ſlow yet effectual alterative in cachexies, ſcurvies, chlorotic, hyſterical, hypochondriacal, and other chronical complaints; and a ſudden remedy in acute diſtempers which demand immediate relief, as pleuriſies, peripneumonies, the ſmall pox, and all kinds of fevers in general. The medicine, though certainly far inferior to the character that has been given of it, is doubtleſs in many caſes of conſiderable utility: it ſenſibly raiſes the pulſe; and occaſions ſome conſiderable evacuations, generally by perſpiration or urine, though ſometimes by ſtool or vomit: hence it is ſuppoſed to act by increaſing the vis vitæ, and enabling nature to expel the morbific humours.

I ſhall here inſert, from the firſt public recommender of this liquor (biſhop Berkley) ſome obſervations on the manner of uſing it. "Tar "water, when right, is not paler "than French, nor deeper co- "loured than Spaniſh white wine, "and full as clear; if there be "not a ſpirit very ſenſibly per- "ceived in drinking, you may "conclude the tar water is not "good. It may be drank either "cold or warm: in cholics, I

“ take it to be beſt warm. As to the quantity, in common chronical indiſpoſitions, a pint a day may ſuffice, taken on an empty ſtomach, at two or four times, to wit, night and morning, and about two hours after dinner and breakfaſt: more may be taken by ſtrong ſtomachs. But thoſe who labour under great and inveterate maladies, muſt drink a greater quantity, at leaſt a quart every twenty-four hours: all of this claſs muſt have much patience and perſeverance in the uſe of this, as well as of all other medicines, which, though ſure, muſt yet in the nature of things be ſlow in the cure of inveterate chronical diſorders. In acute caſes, fevers of all kinds, it muſt be drank in bed, warm, and in great quantity (the fever ſtill enabling the patient to drink) perhaps a pint every hour, which I have known to work ſurpriſing cures. But it works ſo quick, and gives ſuch ſpirits, that the patients often think themſelves cured before the fever hath quite left them.”

AQUA CALCIS SIMPLEX.

Simple lime water.

Lond.

Take a pound of quicklime, and a gallon and a half of water. Pour the water gradually upon the lime, and when the ebullition is over, let the whole ſtand to ſettle: then filter the liquor through paper.

Edinb.

Take half a pound of freſh unſlacked lime, put it into an earthen veſſel, and ſprinkle upon it four ounces of water; keep the veſſel cloſe ſtopped till the effervefcence ceaſes, and the lime is thoroughly ſlacked; when pour upon it twelve pounds of water, and mix them well together. As ſoon as the lime is ſettled, ſhake it again; obſerving to keep the veſſel ſtill cloſe ſhut, to exclude the air. This is to be repeated nine or ten times; and when the lime is perfectly ſettled, filter it through paper.

A lime water may be prepared in the ſame manner from calcined oyſter ſhells.

The reaſon of adding the water by degrees to the lime is, that when poured on at once, it reduces the external part to a kind of muddy ſubſtance, or ſoft paſte, which in ſome meaſure defends the internal part from being acted upon by the water. It does not appear that the different proportions of water, in the two above preſcriptions, occaſion any ſenſible difference in the ſtrength of the product; the quicklime is far from yielding all its ſoluble parts to either proportion; the remainder giving a ſtrong impregnation to many freſh quantities of water, though not ſo ſtrong as to the firſt. The caution of keeping the water in cloſe-ſtopt veſſels ought to be ſtrictly attended to; for in open ones, the calcareous matter, diſſolved in the liquor, ſoon begins to ſeparate, and forms a white cruſt upon the ſurface. This cruſt is not of a ſaline nature, as ſome have imagined; but an inſipid earth, no longer miſcible with watery liquors.

Lime water has been found of great ſervice in ſcrophulous and ſcorbutic complaints, in ſome kinds of alvine fluxes, female weakneſſes, and other diſorders, proceeding from a laxity and debility of the ſolids: particularly in corpulent and phlegmatic habits. It appears likewiſe to be poſſeſſed of a lithontriptic power, and in ſundry calculous caſes has procured conſiderable relief: the lime water prepared from calcined oyſter ſhells, is found to be, in this intention, more efficacious than that of the common ſtone or chalk lime. It is given internally, in the doſe of a quarter of a pint, three or four times a day; and likewiſe uſed externally for waſhing foul ulcers.

AQUA CALCIS. COMPOSITA.

Compound lime water.

Edinb.

Take of
- Saſſafras, root and bark, ſhaved, two ounces;
- Nutmegs, well bruiſed, three drams;
- Liquorice ſliced, one ounce;
- Lime water, freſh prepared, four pints.

Digeſt them together for two days, in a very cloſe veſſel; and then ſtrain the liquor.

AQUA CALCIS MINUS COMPOSITA.

Lime water leſs compounded.

Lond.

Take of
- Liquorice, one ounce;
- Saſſafras bark, half an ounce;
- Simple lime water, ſix pints.

Macerate without heat for two days, and then ſtrain off the liquor.

AQUA CALCIS MAGIS COMPOSITA.

Lime water more compounded.

Lond.

Take of
- Guaiacum wood, ſhaved, half a pound;
- Liquorice, one ounce;
- Saſſafras bark, half an ounce;
- Coriander ſeeds, three drams;
- Simple lime water, ſix pints.

Macerate without heat for two days, and then ſtrain off the liquor.

THIS laſt water has been uſed for ſome time in our hoſpitals under the title of AQUA LIBERANS. As the guaiacum wood difficultly communicates its virtues to the cold liquor, ſome have propoſed boiling it in the lime water before the other ingredients are added; but though this treatment more perfectly extracts the virtues of the wood, it very much injures thoſe of the lime water, the greateſt part of the matter it had taken up from the lime being ſeparated and thrown off in the boiling. Nor indeed is there any occaſion to have recourſe to expedients of this kind; the quantity of the wood in the above preſcription being ſo large, that the liquor receives a ſufficient impregnation from it by maceration in the cold. If however, on this or other occaſions, it ſhould be thought expedient to increaſe the diſſolving power of lime water by boiling, we may do it, without any injury to the lime water, by the method directed by the London college for obtaining a ſolution of ſulphur in this menſtruum, viz. by adding ſome quicklime in ſubſtance, which will continue to give a freſh impregnation to the water, after the lime at firſt diſſolved in it has been ſeparated by the boiling.

In all theſe compoſitions, the additional articles take off the ill flavour of the lime water, render it more grateful both to the palate and ſtomach, and at the ſame time conſiderably promote its medicinal efficacy, eſpecially when intended againſt cutaneous diſorders, and foulneſs of the blood and juices. They may be taken in the ſame quantities as the ſimple lime water, and continued for ſome time; the patient keeping moderately warm during their uſe.

ARTICLE II. *Infuſions in boiling Water.*

INFUSUM AMARUM.
Bitter infuſion.
Edinb.

Take of
- Gentian root, half an ounce;
- Seville orange peel, dried, one dram;
- Coriander ſeed, half a dram;
- Proof ſpirit, four ounces;
- Water, one pound.

Pour on the ſpirit firſt, and let it ſtand three hours, and then the water; macerate without heat twelve hours, and ſtrain it.

INFUSUM AMARUM SIMPLEX.
Simple bitter infuſion.
Lond.

Take of
- Gentian root,
- Freſh yellow rind of lemon peel, carefully freed from the inner white part, each half an ounce;
- Dry yellow rind of Seville orange peel, freed in like manner from the white, one dram and a half;
- Boiling water, three quarters of a pint.

Macerate for an hour or two; then filter the liquor through paper, or paſs it through a ſtrainer, without preſſure.

Both theſe liquors are very elegant and uſeful bitters; the latter in particular is as agreeable as can well be contrived, the peels communicating a fine flavour, which is the only addition of which the gentian ſtands in need. The committee of the London college obſerve, that "moſt of the ingredients, which uſually enter the "compoſition of bitter infuſions, "being prepared by them ſeparately, amongſt all the ſtrong "bitters, gentian gave the moſt "unexceptionable colour, but it "wants the aſſiſtance of ſome ingredient to furniſh an acceptable flavour; ſcarce any of the "bitters accompanied with flavour, "ſuch as zedoary, calamus aromaticus, and the like, appeared to be truly grateful, except "orange peel and cardamom "feeds: but cardamom ſeeds are "mucilaginous, and render the "liquor cloudy; and orange peel "is accompanied with a hot oil, "that requires it to be but ſparingly uſed. Lemon peel, in its "outer rind, to which all its flavour is confined, is not a bitter, "but ſupplies the gentian moſt "ſucceſsfully with what is wanted; "though the compoſition, by a "moderate addition of orange "peel, becomes yet more perfect."

INFUSUM AMARUM PURGANS.
Purging bitter infuſion.
Lond.

Take of
- Sena,
- Yellow rind of lemon peel, freſh, each three drams;
- Gentian root,
- Yellow rind of Seville orange peel, dry,
- Leſſer cardamom ſeeds, freed from the huſks, each half a dram;
- Boiling water, five ounces by meaſure.

Macerate them together, and when cold ſtrain off the liquor.

INFUSUM AMARUM cum SENA.
Bitter infuſion with ſena.
Edinb.

Take of
- Sena, one dram;

Gentian root,
Sweet ſennel ſeeds, each half a dram;
Boiling water, a quarter of a pint.

Infuſe them for four hours, and then ſtrain the liquor.

This infuſion may likewiſe be prepared with two, three, or more times the quantity of ſena.

Both theſe are uſeful purging bitters. The quantities here preſcribed are intended for one doſe: the firſt is the larger, and the other the ſmaller doſe, that ſena is uſually given in.

INFUSUM SENÆ COMMUNE.

Common infuſion of ſena.

Lond.

Take of
Sena, an ounce and a half;
Cryſtals of tartar, three drams;
Leſſer cardamom ſeeds, freed from the huſks, two drams;
Water, one pint.

Boil the cryſtals of tartar in the water, until they are diſſolved; then pour the water, whilſt it continues boiling, upon the other ingredients; and when cold, ſtrain off the liquor for uſe.

In our former pharmacopœia, an alkaline ſalt was uſed in the infuſion of ſena, inſtead of the acid one here directed. The firſt was ſuppoſed to promote the operation of the medicine, by ſuperadding a degree of purgative virtue of its own, and by enabling the water to extract ſomewhat more from the capital ingredient, than it would be capable of doing by itſelf; whilſt acids have rather a contrary effect. Experience however has ſufficiently ſhewn (as the committee aſſure us) "that this infuſion, and the "following one with lemon juice, "do not fail in their intention: "and in a medicine, very nauſeous to many, it is of principal "conſequence to prepare it ſo, that "the lighteſt and leaſt diſguſtful "parts may be extracted." Alkaline ſalts increaſe the offenſiveneſs of the ſena; whilſt cryſtals of tartar conſiderably improve the colour of the infuſion, and likewiſe render the taſte to ſome perſons leſs diſagreeable. Soluble tartar ſhould ſeem a good ingredient in theſe kinds of compoſitions, as it not only improves the taſte, but promotes the purgative virtue of the medicine; this addition alſo renders the infuſion leſs apt to gripe, or occaſion flatulencies.

INFUSUM SENÆ LIMONIATUM.

Infuſion of ſena with lemon.

Lond.

Take of
Sena, an ounce and a half;
Yellow rind of lemon peel, freſh, one ounce;
Lemon juice, one ounce, by meaſure;
Boiling water, one pint.

Macerate them together, and when cold, ſtrain off the infuſion.

This is a very pleaſant and ſufficiently efficacious purge: the committee obſerve, that it is the moſt agreeable form they have been able to contrive for the exhibition of ſena to ſuch as are more than ordinarily offended with its flavour. The doſe is from two ounces to four.

INFUSI SENÆ UNCIÆ QUATUOR.

A four ounce infuſion of ſena.

Edinb.

Take of
Sena, three drams;

Ginger, one ſcruple;
Boiling water, four ounces.
Infuſe for four hours, and then ſtrain off the liquor.

This infuſion is tolerably grateful, the ill flavour of the ſena being in good meaſure covered by the ginger; the quantity of which is here increaſed to double of that in former editions of the pharmacopœia. Formerly two drams of the greater water-figwort were added. The water-figwort has been diſcovered to be the Brazilian herb *iquetaia*, celebrated as a ſpecific corrector of the flavour of ſena. That plant, however, has not been found from experience to anſwer this purpoſe ſo effectually as it was ſuppoſed to do before it was commonly known.

INFUSUM RHABARBARI,

Infuſion of rhubarb.

Edinb.

Take of
Rhubarb, ſliced, half an ounce;
Boiling water, one pint;
Infuſe them for a night, and to the ſtrained liquor add two ounces of ſpirituous cinnamon water.

This appears to be one of the beſt preparations of rhubarb when deſigned as a purgative; water extracting its virtue more effectually than either vinous or ſpirituous menſtrua: in this reſpect rhubarb differs from moſt of the other vegetable cathartics.

TINCTURA ROSARUM.

Tincture of roſes.

Lond.

Take of
Red roſe buds, freed from the white heels, half an ounce;
Strong ſpirit (called oil) of vitriol, one ſcruple;
Boiling water, two pints and a half;
Double refined ſugar, one ounce and a half.
Firſt mingle the ſpirit of vitriol with the water, in a glaſs or glazed earthen veſſel, and in this mixture macerate the roſes; when the liquor is grown cold, ſtrain it, and add the ſugar.

Edinb.

Take of
Red roſes, cleared from the heels, and dried, one ounce;
Spirit of vitriol, one dram;
Boiling water, five pounds;
White ſugar, two ounces.
Mix the acid ſpirit with the water, and infuſe the roſes therein for four hours; than filter the tincture, and add to it the ſugar.

Some have directed the oil of vitriol to be dropt upon the roſes before the water is put to them: but this method is certainly faulty, for ſuch of the roſes as this cauſtic liquor falls upon undiluted, will be burnt up by it, and have their texture deſtroyed. Others have made an infuſion of the roſes in water firſt, and then added the acid, from an apprehenſion, that if this acid be added to the water, it would weaken its powers as a menſtruum; but, as the committee obſerve, whatever the acid ſpirit will hinder the water from extracting, it muſt precipitate, if added afterwards; though in this preparation, the oil of vitriol bears ſo ſmall a proportion to the water, that its effect, in this reſpect, will be very little. The infuſion ſhould be made in a glaſs or ſtone-ware veſſel, rather than a glazed earthen one; for the acid will be apt to corrode the glazing of the latter.

This tincture is of an elegant red colour, and makes a very grateful addition to juleps in hæmorrhages, and all caſes that require mild coolers and ſubaſtringents. It is ſometimes taken with boluſes or electaries of the bark; and likewiſe makes a good gargle.

INFUSUM LINI.
Infuſion of linſeed.

Take of
- Linſeed, whole, two ſpoonfuls;
- Liquorice, ſliced, half an ounce;
- Boiling water, four pints.

Let them ſtand in infuſion by the fire for ſome hours, and then ſtrain off the liquor.

AN ounce of coltsfoot leaves is ſometimes added to theſe ingredients; which addition procures this medicine the title of INFUSUM PECTORALE, *pectoral infuſion*. Both infuſions are ſoft, emollient, mucilaginous liquors; and as ſuch they are directed in defluxions of thin, acrid rheums, and eroſions of the veſſels. They are given to the quantity of a pint a day.

INFUSUM ANTISCORBUTICUM.
Antiſcorbutic infuſion.

Take of
- Buckbean leaves, two ounces;
- Curaſſao oranges, half an ounce;
- Compound horſeradiſh water, four ounces;
- Common water, four pints.

Let the common water, boiling, be poured on the buckbean and orange, and ſuffered to ſtand in a cloſe veſſel for a night; then ſtrain out the liquor, and add to it the horſeradiſh water.

THIS infuſion is a very uſeful, and not inelegant, antiſcorbutic: buckbean appears from experience to be a very efficacious herb in this intention; the aromatic material, here joined to it, alleviates its ill flavour, and at the ſame time promotes its virtue. A quarter of a pint of the liquor may be taken three or four times a day.

INFUSUM CEPHALICUM.
Cephalic infuſion.

Take of
- Wild valerian root, two ounces;
- Roſemary, or ſage, half an ounce;
- Aromatic water, four ounces;
- Common water, four pints.

Let the common water be poured, boiling, on the herb and root, and ſuffered to ſtand for a night in a cloſe veſſel; then ſtrain out the infuſion, and add to it the aromatic water.

THIS infuſion is calculated againſt epileptic diſorders, and other like affections of the nervous ſyſtem. The doſe is a quarter of a pint, to be taken twice a day.

INFUSUM ALCALINUM.
Alkaline infuſion.

Take of
- Salt of tartar, half an ounce;
- Saffron, half a dram;
- Liquorice root, two ounces;
- Boiling water, three pints.

Let them ſtand together in a warm place for eight or ten hours, and then ſtrain out the liquor for uſe.

THIS infuſion is of ſervice in a lentor or viſcidity of the blood and juices, the conſequence of an obſtructed perſpiration, and oftentimes the origin of inflammatory diſtempers. It attenuates thick humours, and promotes the natural ſecretions. It is to be taken warm, in little quantities at a time, but frequently repeated.

INFUSUM DIURETICUM.

Diuretic infuſion.

Take of
- Wormwood leaves, dried, half an ounce;
- Salt of tartar, two ſcruples;
- Compound juniper water, two ounces;
- Common water, twelve ounces.

Pour the common water, boiling, on the wormwood and ſalt of tartar, and, when grown cold, ſtrain off the liquor, and mix with it the juniper water.

THIS infuſion is much of the ſame nature with the foregoing. It is directed in the obſtructions of the viſcera, which frequently ſucceed a long continuance of bilious fevers, or frequent relapſes into them; and which generally end in a dropſy, jaundice, or irregular intermittent. The quantity here preſcribed is to be taken every day, at three doſes, and a purgative occaſionally interpoſed. If intermittent fevers return after the cure of the other diſorders, they are then ſucceſsfully treated by the bark.

Preparations of this kind are likewiſe of conſiderable uſe in maniacal diſorders; in which, as Dr. Mead obſerves, evacuations by the kidneys are of greater conſequence than is generally ſuppoſed; eſpecially if the mania be of the furious kind, and accompanied with febrile heat. Alkaline ſalts, given in large doſes, are here the moſt effectual diuretics.

INFUSUM PARALYTICUM.

Paralytic infuſion.

Take of
- Horſeradiſh root, ſhaved,
- Muſtard ſeed, bruiſed, each four ounces;
- Boiling water, four pints.

Let them ſteep together, in a cloſe veſſel, for twenty-four hours.

THIS infuſion is ſtrongly impregnated with the pungency of the muſtard ſeed and horſeradiſh, which by this ſimple proceſs give out the whole of their virtues. Though the medicine is deſigned chiefly (as its title expreſſes) for a ſtimulant in paralytic complaints, there are ſeveral other diſorders in which it may be employed to good advantage; in ſcorbutic caſes, in particular, it promiſes to be a remedy of great utility: it generally promotes the urinary diſcharge; and, if the patient be kept warm, perſpiration. It is taken ſometimes to half a pint, twice a day.

THEA ANTIPHTHISICA.

Antiphthiſical tea.

Take of
- Avens root, two ounces;
- Male ſpeedwell,
- Ground-ivy, each one ounce and a half;
- Liquorice, one ounce;
- Sweet fennel ſeeds, three drams.

THESE ingredients are to be cut, bruiſed, and well mixed together; and half an ounce of the compoſition infuſed for a few minutes in five or ſix tea-cups full of boiling water. In conſumptive caſes and diſorders of the breaſt, one cup of the infuſion, with a tea-ſpoonfull of honey, may be drank every hour or two. After the ſame manner, medicated teas may be prepared from other vegetable ſubſtances, as camomile flowers, linſeed, orange peel, fumitory, &c.

INFUSUM CINNAMOMI.

Infuſion of cinnamon.

Take two ounces of powdered cinnamon, and two pints of boiling water. Infuſe them in a cloſe veſſel, in a moderate heat, for half an hour; and then filter the liquor.

This infuſion is agreeably impregnated with the flavour and warmth of the ſpice, and may, on many occaſions, ſupply the place of the ſimple cinnamon water.

ARTICLE III. *Decoctions.*

The effect of boiling differs from that of infuſion in ſome material particulars. One of the moſt obvious differences is, that as the eſſential oils of vegetables, in which their ſpecific odours reſide, are volatile in the heat of boiling water, they exhale in the boiling along with the watery ſteam, and thus are loſt to the remaining decoction; whereas both in cold and hot infuſions they are preſerved. Odorous ſubſtances, and thoſe in general whoſe virtues depend on their volatile parts, are therefore unfit for this treatment. The ſoluble parts of theſe may, nevertheleſs, be united in this form with thoſe bodies of a more fixed nature; by boiling the latter till their virtues are ſufficiently extracted, and then infuſing the former in this decoction.

The extraction of the virtue of the ſubject is uſually promoted or accelerated by a boiling heat; but this rule is leſs general than it is commonly ſuppoſed to be. We have already obſerved, that Peruvian bark gives out its virtue more perfectly by cold infuſion than by coction. In ſome caſes, boiling occaſions a manifeſt diſunion of the principles of the ſubject. Thus, when almonds are triturated with cold water, their oil, blended with the mucilaginous or other ſoluble matter of the almond, unites with the water into a milky liquor called an emulſion: but on boiling them in water, the oil ſeparates and riſes to the ſurface; and if the moſt perfect emulſion be made to boil, a like ſeparation happens.

DECOCTUM ALBUM.
The white decoction.

Lond.

Take of
  Calcined hartſhorn, prepared, two ounces;
  Gum Arabic, two drams;
  Water, three pints.
Boil them till only two pints remain, and then ſtrain off the liquor.

Edinb.

Take of
  Calcined hartſhorn, prepared, one ounce;
  Gum Arabic, two drams;
  Common water, three pints;
  Cinnamon, bruiſed, one dram;
  White ſugar, two drams.
Boil the calcined hartſhorn and gum in the water till only two pints remain, adding the cinnamon towards the end: in this decoction, unſtrained, diſſolve the ſugar.

These decoctions are uſed as common drink in acute diſeaſes attended with a looſeneſs, and where acrimonious humours abound in the primæ viæ. The gum is added in order to render the liquor lightly glutinous, and thus enable it to ſuſtain more of the calx; which is the ingredient that the colour, but probably not the virtue, of the medicine depends upon. Calcined hartſhorn has no quality from which it ſeems capable either of *conſtringing* and ſtrengthening the veſſels, giving a greater degree of conſiſtency to *thin* fluids, or obtunding *acrimonious* humours. It blunts and abſorbs acid juices; but acrimony and acidity are very different: there are few (perhaps none of the acute) diſorders of adults attended with the latter; and few of infants are unaccompanied therewith. Some have propoſed ſtarch as an ingredient in theſe kinds of decoctions; a ſmall quantity of this ſoft, gelatinous, farinaceous ſubſtance ſhould ſeem to be greatly preferable to the earthy calx. It may be obſerved that the water is not enabled by the boiling to diſſolve any part of the calx; and that in the decoction, the earth is only diffuſed in ſubſtance through the water, as it would be by agitation.

DECOCTUM ALTHÆÆ.

Decoction of marſhmallow root.
Edinb.

Take of
- Marſhmallow root, dried, four ounces;
- Raiſins of the ſun, ſtoned, two ounces;
- Water, ſeven pounds.

Boil to five pounds; ſtrain the liquor, and when the fæces have ſettled, pour it off.

DECOCTUM CRETACEUM.

Chalk decoction.
Edinb.

Take of
- White chalk, prepared, one ounce;
- Nutmeg, bruiſed, one dram;
- Gum Arabic, two drams;
- White ſugar, half an ounce;
- Common water, three pints.

Boil the water with the chalk and gum till it is reduced to a quart, adding the nutmeg towards the end; and, in the turbid decoction, diſſolve the ſugar.

Here, as in the white decoction, the abſorbent earth is only mixed in ſubſtance with the water, and the uſe of the gum is to prevent its ſubſiding. As a medicine, chalk is more effectual than calcined hartſhorn, in all the intentions for which theſe kinds of earths are given.

DECOCTUM JAPONICUM,

Japonic decoction.
Edinb.

Take of
- The confectio japonica (deſcribed hereafter among the electaries) one ounce;
- Common water, a pint and a half;
- Spirituous cinnamon water,
- Syrup of meconium, each one ounce.

Boil the confection in the common water, till the liquor, after ſtraining, will amount to a pint; to which, while turbid, add the cinnamon water and the ſyrup.

This decoction is uſed, both in draughts and in glyſters, as an anodyne and reſtringent in fluxes. The quantity here preſcribed contains two grains and a half of opium, excluſive of the ſyrup.

DECOCTUM ad ICTERICOS.

Decoction for the jaundice.
Edinb.

Take of
- Celandine, roots and leaves,
- Turmeric,
- Madder, each one ounce;
- Millepedes, two hundred;
- Water, three pints.

Boil the celandine, turmeric, and madder, in the water, till only a quart of liquor remains after ſtraining: then, having preſſed out the juice of the millepedes, add this to the decoction when grown cold.

The ingredients of which this decoction is compoſed, have been long held by many as ſpecifics for the cure of the diſeaſe expreſſed in its title. The medicine, though not a little unpleaſant, is well calculated to anſwer many uſeful purpoſes, if well managed and properly aſſiſted. A quarter of a pint may be taken twice a day, or oftener.

DECOCTUM LIGNORUM.

Decoction of the woods.

Edinb.

Take of
- Guaiacum ſhavings, three ounces;
- Raiſins of the ſun, ſtoned, two ounces ;
- Saſſafras wood, ſhaved, one ounce ;
- Liquorice, ſliced, half an ounce ;
- Water, one gallon.

Boil the guaiacum and raiſins with the water, over a gentle fire, to the conſumption of one half : adding, towards the end, the ſaſſafras and liquorice. Strain out the liquor, and having ſuffered it to reſt for ſome time, pour off the clear from the fæces.

This decoction is very well contrived, and if its uſe be duly continued, will do great ſervice in ſome cutaneous diſeaſes, foulneſs of the blood and juices, and ſome diſorders of the breaſt ; particularly in cold phlegmatic habits. It may be taken by itſelf, in the quantity of a quarter of a pint, two or three times a day, or uſed as an aſſiſtant in a courſe of mercurial or antimonial alteratives ; the patient in either caſe keeping warm, in order to promote the operation of the medicine.

DECOCTUM ad NEPHRITICOS.

Nephritic decoction.

Edinb.

Take of
- Marſhmallow roots, one ounce and a half ;
- Liquorice,
- Linſeed, each half an ounce ;
- Pellitory of the wall, one ounce ;
- Raiſins of the ſun, ſtoned, two ounces ;
- Water, ſix pints.

Boil the water with the marſhmallow root and raiſins to four pints, adding the other ingredients towards the end. Strain out the liquor, and let it ſettle till fine.

This decoction is intended chiefly as an emollient, to be liberally drunk in nephritic paroxyſms ; in which caſes, by ſoftening and relaxing the parts, it frequently relieves the pain, and procures an eaſy paſſage for the ſabulous matter. The medicine is now made more ſimple, without any diminution of its virtue, by the rejection of wild carrot ſeed, reſtharrow root, and figs, the place of which is abundantly ſupplied by an increaſe of the marſhmallow root, linſeed, and liquorice. The carrot ſeeds were indeed unfit for this form, as they give out little of their virtue to watery liquors.

DECOCTUM NITROSUM.

Nitrous decoction.

Edinb.

Take of
- Pure nitre, half an ounce ;
- White ſugar, two ounces ;
- Cochineal, one ſcruple ;
- Water, two pints and a half.

Boil to two pints, then ſuffer the whole to reſt for ſome time, and pour off the clear decoction.

This is an elegant way of diſguiſing nitre, and rendering it agreeable to the patient, both which intentions are fully anſwered by the cochineal and ſugar. There does not ſeem to be any occaſion for ſo long boiling : for the water will diſſolve a much larger quantity of the nitre and ſugar than is directed above, without any heat, and it eaſily extracts a fine colour from cochineal.

The virtues of nitre have been already mentioned in the preceding part. This, or other ſimilar forms, are the moſt commodious for the exhibition of it; for when given in a ſolid form, it often occaſions great uneaſineſs about the ſtomach. Two or three ounces of this decoction may be taken for a doſe.

DECOCTUM PECTORALE.

Pectoral decoction.

Lond.

Take of
- Common barley,
- Stoned raiſins,
- Figs, each two ounces;
- Liquorice, half an ounce;
- Water, four pints.

Firſt boil the water with the barley, then add the raiſins, and laſtly (juſt before the end of the proceſs) the figs and liquorice; the boiling is to be continued ſo long, that the liquor, when ſtrained, may be no more than two pints.

Edinb.

Take of
- Stoned raiſins of the ſun,
- Barley, each one ounce;
- Fat figs, in number four;
- Florentine orris root,
- Liquorice,
- Coltsfoot flowers, each half an ounce:
- Water, ſix pints.

Boil the water with the raiſins, barley, and figs, till only four pints remain; adding, towards the end, the other ingredients; then ſtrain out the liquor for uſe.

Both theſe decoctions are uſeful ſoft pectorals; and very agreeable to the palate, particularly the firſt. They are good auxiliaries in ſharp defluxions on the breaſt and lungs, and have ſometimes done ſervice by themſelves. They may be drunk at pleaſure.

DECOCTUM SERPENTARIÆ COMPOSITUM.

Compound decoction of ſnakeroot.

Edinb.

Take of
- Virginian ſnakeroot, ſix drams;
- Edinburgh theriaca (deſcribed hereafter among the electaries) half an ounce;
- Cochineal, one ſcruple;
- Water, two pints.

Boil the water with the ſnakeroot to one half, adding the theriaca and cochineal towards the end: then ſtrain out the liquor for uſe.

This preparation is an uſeful ſudorific and alexipharmac, containing nearly all the virtue of the ſnakeroot, and great part of that of the theriaca. The quantity of theriaca here preſcribed holds nearly three grains and a half of opium; ſo that about a fifth of a grain of opium, or ſomewhat more, goes to an ounce meaſure of the decoction.

DECOCTUM TAMARINDORUM cum SENA.

Decoction of tamarinds with ſena.

Edinb.

Take of
- Tamarinds, ſix drams;
- Cryſtals of tartar, two drams;
- Sena, one dram;
- Syrup of violets, one ounce;
- Simple cinnamon water, half an ounce;
- Common water, a pint and a half.

Boil the common water with the tamarinds and cryſtals of tartar, ſo long that there may be a pint of ſtrained liquor: in which, whilſt hot, infuſe the ſena for four hours: afterwards ſtrain off the liquor, and add to it the ſyrup of violets and cinnamon water.

This decoction may likewiſe be prepared with two, three, or more times the quantity of ſena,

This is a ſufficiently efficacious, and not diſagreeable, cooling purge. The quantity here preſcribed, is intended for a doſe, which may be divided into three or four parts, to be taken at ſhort intervals, as the ſtomach will bear it.

AQUA HORDEATA.

Barley water.

Lond.

Take of

Pearl barley, two ounces;
Water, four pints.

Firſt waſh the barley from the mealy matter that adheres to it, with ſome cold water; then boil it a little with about half a pint of freſh water, which will acquire a conſiderable tinge from it. Throw away this tinged water; put the barley into the water preſcribed, made firſt to boil; and continue the boiling till half the water is waſted.

This liquor is to be drunk freely, as a diluter, in fevers and other diſorders. Hence it is of conſequence that it ſhould be prepared ſo as to be as elegant and agreeable as poſſible; for this reaſon, it was inſerted in the pharmacopœia, and the ſeveral circumſtances which contribute to its elegance ſet down; if any one of them be omitted, the beverage will be leſs grateful. However trivial medicines of this claſs may appear to be, they are of greater importance, in the cure of acute diſeaſes, than many more laborious preparations.

MUCILAGO SEMINUM CYDONIORUM.

Mucilage of quince ſeeds.

Lond.

Take of

Quince ſeeds, one dram;
Water, ſix ounces by meaſure.

Boil them, over a ſoft fire, till the water grows ſlimy, almoſt like the white of an egg; then paſs it through a linen cloth.

This is a pleaſant ſoft mucilage, of a ſomewhat ſweetiſh taſte, and a light agreeable ſmell: in theſe reſpects, and in its eaſy ſolubility in water, it differs from the mucilage of gum tragacanth, to which ſome have ſuppoſed it ſimilar. It has another difference, to its diſadvantage, being apt to grow mouldy in keeping.

GELATINA CORNU CERVI.

Jelly of hartſhorn.

Edinb.

Take of

Hartſhorn ſhavings, half a pound;
Water, three quarts;
White ſugar, ſix ounces;
Mountain wine, a quarter of a pint;
Orange (or lemon) juice, one ounce.

Boil the hartſhorn with the water by a gentle heat in a glazed earthen veſſel, till two parts are waſted; ſtrain out the remaining liquor, add to it the other ingredients, and boil the whole over a gentle fire, to the conſiſtence of a ſoft jelly.

JUS VIPERINUM.

Viper broth.

Lond.

Take the middle-ſized viper, freed from the head, ſkin, and inteſtines;

tines; and two pints of water. Boil them to a pint and a half; then remove the veſſel from the fire; and when the liquor is grown cold, let the fat, which congeals upon the ſurface, if the viper were freſh, be taken off. Into this broth, whilſt warm, put a pullet of a moderate ſize, drawn and freed from the ſkin, and all the fat, but with the fleſh intire. Set the veſſel on the fire again, that the liquor may boil; then remove it from the fire, take out the chicken, and immediately chop its fleſh into little pieces: put theſe into the liquor again, ſet it over the fire, and as ſoon as it boils up, pour out the broth, firſt carefully taking off the ſcum.

Here, all the circumſtances ſubſervient to the perfection of the broth, are carefully ſet down: and even plain chicken broth, for the uſe of the ſick, ought to be made in a ſimilar manner.

This ſeems to be one of the beſt preparations of the viper; all the benefit that can be expected from that animal being by this means there obtained. It is very nutritious and reſtorative food: continued for a length of time, it has ſometimes done good ſervice in leprous and other obſtinate cutaneous diſeaſes. The dried fleſh of the vipers, brought from abroad, is not at all ſuperior to the freſh vipers of our own country. The wines and tincture of the animal, probably, have little virtue. The volatile ſalt, however ſtrongly recommended by ſome, does not appear to differ from that producible from every animal ſubſtance. See chap. viii. ſect. 2.

DECOCTUM ANTIHECTICUM.
Antihectic decoction.

Take of
Comfry root,
Eryngo root, each half an ounce;
Conſerve of roſes, two ounces;
Dulcified ſpirit of vitriol, forty drops;
Water, three pints.

Boil the water with the roots and the conſerve, till one pint is waſted; then ſtrain off the remaining liquor, and add to it the dulcified ſpirit.

This decoction is uſefully given in hectic caſes, where thin acrimonious humours abound, and in beginning conſumptions. The doſe is a quarter of a pint, to be taken two or three times a day.

DECOCTUM VULNERARIUM.
Vulnerary decoction.

Take of
The herb ground-ivy,
Plantane leaves,
White ſugar, each half an ounce;
Water, three pints.

Boil the herbs in the water, ſo long that there may be only two pints of ſtrained liquor; in which diſſolve the ſugar.

The herbs which give virtue to this decoction, have long been celebrated as ſpecifics for the cure of internal contuſions and ulcerations, of coughs and pulmonary phthiſes proceeding either from bruiſes, or an eroſion of the viſcera from a ſpontaneous acrimony of the humours. Though the real virtues of theſe plants fall ſhort of the character which has been uſually given of them, yet experience has ſhewn that they are ſuperior to numerous others which have been very ſtrongly recommended.

DECOCTUM ANTIFEBRILE.
Antifebrile decoction.

Take of
Virginian ſnake-root, bruiſed,
Peruvian

Peruvian bark, in powder, each three drams;
Water, one pint.
Boil them to half a pint; and having ſtrained off the liquor, mix with it, of
Spirituous cinnamon water, an ounce and a half;
Syrup of clove july-flowers, two drams.

In the putrid malignant fever, ariſing from foul air in crowded hoſpitals and jails, this medicine has been given with remarkable ſucceſs. In the low ſtate of this dangerous diſeaſe, when the pulſe, before quick, begins to ſink, the ſtupor to increaſe, and petechiæ to appear; it promiſes to be a very uſeful remedy for ſupporting the *vis vitæ*, promoting a critical diaphoreſis, and correcting the putrid humours. Four ſpoonfuls of the decoction are to be taken every four or ſix hours; and moderate quantities of wine or cordial boluſes, with volatile ſalts interpoſed, at proper intervals.

Decoctum febrifugum.
A febrifuge decoction.

Take of
Camomile flowers, dried, two ounces;
Salt of tartar, two drams;
Water, three pints.
Boil the water with the camomile flowers, till one pint of the liquor be waſted; then ſtrain out the remaining decoction, and diſſolve in it the alkaline ſalt.

In a thick viſcid ſtate of the blood and juices, and obſtructions of the abdominal viſcera, a quarter of a pint of the decoction, taken three or four times a day, has ſometimes removed intermittent fevers, after the Peruvian bark had been tried in vain. It is nearly ſimilar to the alkaline and diuretic infuſions deſcribed above.

Apozema aperiens.
Aperient apozem.

Take of
Rhubarb,
Madder, each three drams;
Salt of tartar, two drams;
Water three pints.
Boil them together for an hour, and having ſtrained out the decoction, add to it three ounces of ſyrup of ginger.

This promiſes to be a very powerful aperient and attenuating medicine, of great ſervice in icterical and hydropic caſes. The doſe is three ounces, which may be repeated thrice a day.

Decoctum astringens.
Aſtringent decoction.

Take of
Tomentil root, one ounce;
Pomegranate peel,
Plantane leaves, each half an ounce;
Syrup of dry roſes, one ounce;
Water, three pints.
Boil the water with the tormentil, granate peel, and plantane, till one pint be waſted, adding the cinnamon towards the end: then ſtrain off the decoction, and mix with it the ſyrup.

The title of this preparation ſufficiently expreſſes its virtues. The doſe, in fluxes where the morbid matter has been evacuated, and aſtringency is the only indication, is from one to four ounces, three or four times a day.

Decoctum bardanæ.
Decoction of burdock.

Take of
Burdock roots, two ounces;
Vitriolated tartar, one dram;
Water, three pints.

Boil the water with the roots, ſo long, that the liquor, when ſtrained, may amount only to a quart; to which add the vitriolated tartar.

This decoction is drunk to the quantity of a pint a day, as a mild aperient, diuretic, and ſweetner, in ſcorbutic and rheumatic complaints.

DECOCTUM CAMPECHENSE.

Decoction of logwood.

Take of
Shavings of logwood, three ounces;
Cinnamon, two drams;
Water, four pints.

Boil the water with the logwood till half the liquor be waſted, adding the cinnamon towards the end of the boiling; then ſtrain out the decoction for uſe.

This is an agreeable mild reſtringent, in diarrhœas and other fluxes, where ſtronger aſtringents would be improper or unſafe. It is given in the hoſpitals in doſes of a quarter of a pint, three or four times a day. It generally tinges the ſtools red, which has occaſioned ſome to be alarmed, as if the colour proceeded from a diſcharge of blood. The patient therefore is to be cautioned againſt any ſurprize on that account.

DECOCTUM DIURETICUM.

Diuretic decoction.

Take of 1.
Parſley, or fennel roots, one ounce:
Wild carrot ſeeds, three drams;
Pellitory of the wall, half an ounce:
Raiſins, two ounces;
Nitre one dram;
Water, three pints:

Boil the water with the roots, ſeeds, pellitory, and raiſins, ſo long, that there may be only two pints of liquor after ſtraining; in which diſſolve the nitre.

Take of 2.
Graſs roots, two ounces;
Sorrel, or wood ſorrel leaves, one handful;
Tamarinds, an ounce and a half;
Nitre, two drams;
Barley water, three pints.

Boil the roots in the barley water, till one pint of the liquor be waſted, adding towards the end the ſorrel, tamarinds, and nitre: then ſtrain out the apozem for uſe.

Take of 3.
Marſhmallow roots, freſh, one pound;
Fennel roots, half a pound;
Nitre, half an ounce;
Water, one gallon.

Boil the water with the roots, till one-fourth of the liquor be waſted; then ſtrain off the remaining decoction, and diſſolve in it the nitre.

These cooling aperient liquors are uſed, like the nephritic decoction already deſcribed, as common drink for promoting urine in nephritic diſeaſes. They may be taken with ſafety, and often with good effect, in inflammatory caſes, where the hot ſtimulating diuretics would be manifeſtly prejudicial.

DECOCTUM PERUVIANUM.

Peruvian decoction.

Take of
Peruvian bark, in powder, two ounces;
Water, three pints.

Boil them together till one pint of the liquor be waſted, and then ſtrain off the remaining decoction for uſe.

This decoction ſhould be paſſed only through a coarſe ſtrainer, and drunk whilſt turbid: if ſuffered to ſtand till clear, the more efficacious parts of the bark will ſubſide. We have formerly obſerved, that the virtues of this drug conſiſt chiefly in its reſinous ſubſtance, which, though it may be totally melted out by the heat of boiling water, remain only partially ſuſpended in that menſtruum: ſee page 272.

Decoctum senekæ.

Decoction of ſeneka.

Take of
- Seneka, rattle-ſnake root, one ounce;
- Water, a pint and a half.

Boil to one pint, and ſtrain.

The virtues of this decoction will be eaſily underſtood by thoſe of the root from which it is prepared. See page 227. The doſe, in hydropic caſes, and rheumatic or arthritic complaints, is two ounces, to be repeated three or four times a day, according to its effect.

Decoctum terræ Japonicæ.

Decoction of Japan earth.

Take of
- Japan earth, two drams;
- Spirituous cinnamon water;
- Syrup of quinces, each two ounces;
- Common water, one pint.

Boil the common water with the Japan earth, till about one-fourth of the liquor be waſted; then ſuffer the decoction to ſettle, and having poured off the clear part, add to it the ſpirituous water and the ſyrup.

This decoction is a very agreeable and uſeful medicine in fluxes, that are not critical or ſymptomatic, and in a weak lax ſtate of the inteſtines. A ſpoonful or two may be taken every hour or oftener: thus managed, it produces much better effects than if larger doſes be given at once.

FOTUS COMMUNIS.

The common fomentation.

Lond.

Take of
- Abrotanum leaves, dried,
- Sea wormwood tops, dried,
- Camomile flowers, dried, each one ounce;
- Bay leaves, dried, half an ounce;
- Water, ſix pints.

Lightly boil them, and ſtrain out the decoction for uſe.

It is left to the choice of the apothecary to take either the male or female *abrotanum*, that is ſouthernwood, or lavender-cotton: which, though differing from one another in ſome reſpects, may be looked upon as ſimilar with regard to the purpoſes for which this compoſition is intended: nor indeed can either of them give much aſſiſtance to camomile flowers and wormwood. The uſe of this decoction is expreſſed in its title. Spirit of wine, which is commonly added in fomentations, is left to be directed by the preſcriber, in ſuch quantity as particular caſes may require.

DECOCTUM COMMUNE pro CLYSTRE.

The common decoction for glyſters.

Lond.

Take of
- Mallow leaves dried, one ounce;
- Camomile flowers, dried,
- Sweet fennel ſeeds, each half an ounce;
- Water, one pint.

Boil them together, and ſtrain out the decoction for uſe.

The title of this decoction ſufficiently expreſſes its uſe, as the baſis of glyſters. The ingredients ſhould be very lightly boiled, at leaſt the camomile flowers and fennel ſeeds not put in till towards the end, a part of the virtue of theſe being ſoon loſt by boiling.

DECOCTUM COMMUNE.

The common decoction.

Edinb.

Take of
  Camomile flowers, one ounce;
  Coriander ſeed half an ounce;
Water, two quarts.
Make them juſt boil, and then ſtrain out the liquor. The virtues of the ingredients may be ſufficiently extracted alſo, by infuſing them for ſome hours in the boiling water.

This decoction is intended to anſwer the purpoſes of both the foregoing. It is leſs loaded with the ingredients than either, but not perhaps for that reaſon the leſs uſeful.

Fotus anodynus.

Anodyne fomentation.

Take of
  Garden poppy heads, one ounce;
  Elder flowers, half an ounce;
  Water, three pints.
Boil them till one pint be waſted, and then ſtrain out the liquor for uſe.

This fomentation is preſcribed for tumefied and inflamed parts, to abate the inflammation and pain. Whether the opiate matter in the poppy heads contribute much to this intention, may be queſtioned; as the effects of the compoſition may be attributed perhaps more to the warm fluid ſoftening and relaxing the ſkin, than to the particular qualities of the matters with which it is impregnated.

Fotus aromaticus.

Aromatic fomentation.

Take of
  Cloves,
  Mace, each one dram;
  Red wine, one pint.
Boil them a little, and ſtrain off the liquor.

This preparation is intended not only as a mere topical application for external complaints, but likewiſe for relieving the internal parts. The pains of the bowels which accompany dyſenteries and diarrhœas, flatulent colics, uneaſineſs at the ſtomach, and reachings to vomit, are frequently abated by fomenting the abdomen and region of the ſtomach with the warm liquor.

Fotus roborans.

Strengthening fomentation.

Take of
  Oak bark, one ounce;
  Granate peel, half an ounce;
  Alum, two drams;
  Smith's forge water (that is, water in which red hot iron has been ſeveral times quenched) three pints.
Boil the water, with the oak bark and granate peel, to the conſumption of one-third; then ſtrain the remaining decoction, and diſſolve in it the alum.

This is a ſtrong aſtringent liquor, in which intention it is directed both as a fomentation for ſtrengthening relaxed parts, and as an injection in the fluor albus.

SECT. II.

Wheys.

SERUM SOLUTIVUM

Laxative whey.

Take of
  Damaſk roſe buds, freſh, one ounce;
  Whey, two pints.
Steep them together for a night, and then ſtrain out the whey for uſe.

WHEY, thus impregnated with the virtues of the damaſk roſe, operates very gently by ſtool, and for this purpoſe is held by ſome in great eſteem. Its action may be quickened, and its taſte rendered more agreeable, by the addition of a ſuitable proportion of cryſtals of tartar.

SERUM SINAPINUM.

Muſtard whey.

Take of
  Muſtard ſeed, bruiſed, three ſpoonfuls;
  Cows milk, two pints.
Set the milk over the fire to boil, and add to it the muſtard ſeed, that a curd may be formed, from which the whey is to be carefully ſeparated.

THIS is not an inelegant form for the exhibition of muſtard ſeed; its pungency, and medicinal virtues depending thereon, being in great meaſure communicated to the whey.

SERUM ALUMINOSUM.

Alum whey.

Lond.

Take of
  Cows milk, one pint;
  Alum, in powder, two drams.
Boil them till the milk be curdled, and then carefully ſeparate the whey.

THIS medicine is a ſtrong, though not very grateful, aſtringent. It is given in immoderate uterine fluxes, and ſometimes in the diabetes, in which laſt intention it is recommended by Dr Mead. The doſe is a quarter of a pint three or four times a day. It has been recommended alſo in intermittent fevers, the quantity above preſcribed to be taken before the approach of a fit, divided into different doſes: but, in this diſorder, great caution is requiſite in the uſe of ſo ſtrong an aſtringent.

SERUM SCORBUTICUM.

Scorbutic whey.

Lond.

Take of
  Cows milk, one pint;
  Scorbutic juices, a quarter of a pint.
Boil them till the milk is curdled, and then carefully ſeparate the whey.

THIS whey may be uſed as common drink in ſcorbutic caſes: the quantity above directed, at leaſt, ought to be taken every day, if any conſiderable effect be expected from it.

SECT. III.

Vinegars.

VINEGAR extracts the virtues of ſeveral medicinal ſubſtances in tolerable perfection; but at the ſame time its acidity makes a notable alteration in them, or ſuperadds virtue of a different kind; and hence it is more rarely employed in this intention, than purely aqueous, or ſpirituous menſtrua. Some drugs, however, vinegar, for particular purpoſes, excellently aſſiſts, or coincides with, as ſquills, garlick, ammoniacum, and others: and, in many caſes where this acid is itſelf principally depended on, it may be advantageouſly impregnated with the flavour of certain vegetables; moſt of the odoriferous flowers impart to it their fragrance, together with a fine purpliſh, or red colour; violets, for inſtance, if freſh parcels of them be infuſed in vinegar in the cold for a little time, communicate to the liquor a pleaſant flavour, and deep purpliſh red colour. Vinegar, like other acids, added to watery infuſions or decoctions, generally precipitates a part of what the water had diſſolved.

ACETUM ROSACEUM.

Vinegar of Roſes.

Edinb.

Take of

Red roſes dried, one pound;

Strong vinegar, one gallon.

Expoſe them to the ſun in a cloſe veſſel, for forty days, and then ſtrain off the liquor.

THIS is ſcarce otherwiſe made uſe of than for embrocating the head and temples in ſome kinds of head-ach, &c. in which it has now and then been of ſervice.

ACETUM SCILLITICUM.

Vinegar of Squills.

Lond.

Take of

Dried ſquills, one pound;

Vinegar, ſix pints.

Macerate the ſquills in the vinegar with a gentle heat; then preſs out the liquor, and ſet it by till the fæces have ſubſided. The vinegar being afterwards poured off, add to it about one-twelfth of its quantity of proof ſpirit, that it may keep the longer from growing mothery.

IT ſhould ſeem moſt convenient to add the ſpirit before the vinegar is decanted; for by theſe means, the purification is accelerated and rendered more perfect; and the liquor prevented from growing foul a ſecond time, which it is apt to do upon the effuſion of the ſpirit, however carefully it may have been depurated before,

Edinb.

Take of

The root of dried ſquills, two ounces;

Diſtilled vinegar, two pounds and an half;

Rectified ſpirit of wine, three ounces.

Macerate the ſquills with the vinegar eight days, and expreſs the vinegar, to which add the ſpirit, and, when the fæces are ſubſided, pour off the liquor.

VINEGAR of ſquills is a medicine of great antiquity. We find in a treatiſe attributed to Galen, an account of its preparation, and of many particular virtues then aſcribed to it. It is a very powerful ſtimulant, aperient, and attenuant of tenacious juices: and hence is frequently uſed, with good ſucceſs, in diſorders of the breaſt occaſioned by a load of thick viſcid phlegm, for promoting urine in hydropic caſes, &c. See the ſection of acrids, page 69. The doſe of this medicine is from a dram to half an ounce: where crudities abound in the firſt paſſages, it may be given at firſt in a larger doſe, to evacuate them by vomit. It is moſt conveniently exhibited along with cinnamon, or other agreeable aromatic waters, which prevent the nauſea it would otherwiſe, even in ſmall doſes, be apt to occaſion.

ACETUM PROPHYLACTICUM.

Prophylactic vinegar.

Paris.

Take of
- Freſh tops of common wormwood,
  - Roman wormwood,
  - Roſemary,
  - Sage,
  - Mint,
  - Rue, each one ounce and a half;
- Lavender flowers, dried, two ounces;
- Garlick,
- Calamus aromaticus,
- Cinnamon,
- Cloves,
- Nutmegs, each two drams;
- Strong vinegar, eight pints.

Digeſt them, by the heat of the ſun or a ſand-bath, in a matraſs cloſely ſtopt, for twelve days; then ſtrongly preſs out and ſtrain the liquor, and having afterwards filtered it, add half an ounce of camphor diſſolved in ſpirit of wine.

THIS compoſition is deſigned, as its title expreſſes, for an antipeſtilential. It is ſaid that during the plague at Marſeilles, four perſons, by the uſe of this preſervative, attended, unhurt, multitudes of thoſe who were infected; that under colour of thoſe ſervices, they robbed both the ſick and the dead; and that one of them being afterwards apprehended, ſaved himſelf from the gallows by diſcovering the remedy. The preparation is hence called *Vinaigre des quatre voleurs,* the vinegar of the four thieves. It is not to be doubted, that vinegar impregnated with antiſeptic vegetables, will contribute greatly to prevent the effects of contagious air.

ACETUM THERIACALE.

Treacle vinegar.

Edinb.

Take of
- Edinburgh theriaca, deſcribed hereafter among the electaries, one pound;
- Strong vinegar, four pints.

Digeſt them together, in a very gentle heat for three days; and then ſtrain out the vinegar for uſe.

THIS medicine has been greatly celebrated in acute and contagious diſeaſes, as a ſudorific and alexipharmic. Some have choſen to employ the vinegar as a vehicle, rather than as a menſtruum, for the theriaca; in either caſe, it is indiſputably, for ſundry purpoſes, an uſeful addition. To half an ounce by meaſure of the compoſition here preſcribed, there goes ſomewhat more than half a grain of opium; tho' it does not appear that the medicine has all the effect which might be expected from that article.

ACETUM LITHARGYRITES

Vinegar of litharge.

Edinb.

Take of
- Litharge, four ounces;
- Strong vinegar, one pint.

Digeſt in a ſand-heat, for three days, frequently ſhaking them; then filter the liquor for uſe.

This liquor is of the ſame nature with ſolutions of *ſaccharum ſaturni*, of which hereafter. It is only uſed externally, as a coſmetic, againſt cutaneous eruptions, redneſs, inflammations, &c. But even here, it is not void of danger; there are examples of its continued uſe having occaſioned ſundry ill conſequences.

SECT. IV.

Wines.

The original intention of medicated wines was, that medicines, which were to be continued for a length of time, might be taken in the moſt familiar and agreeable form; by theſe means, a courſe of remedies was complied with, notwithſtanding the repugnance and averſion which the ſick often manifeſt to thoſe directly furniſhed from the ſhops: and hence the inferior ſort of people had their medicated ales. Nevertheleſs, as vinous liquors excellently extract the virtues of ſeveral ſimples, and are not ill fitted for keeping, they have been employed as officinal menſtrua alſo, and ſubſtances of the greateſt efficacy are truſted in this form. As compounds of water and inflammable ſpirit, they take up ſuch parts of vegetables and animals as are ſoluble in thoſe liquors; though moſt of them abound at the ſame time with a mucilaginous or viſcous ſubſtance, which renders them leſs effectual menſtrua than purer mixtures of water and ſpirit. They contain likewiſe a ſubtile acid, which ſomewhat further obſtructs their action on certain vegetable and animal matters, but enables them, in proportion to its quantity, to diſſolve ſome bodies of the metallic kind, and thus impregnate themſelves with the corroborating virtues of ſteel, the alterative and emetic powers of antimony, and the noxious qualities of lead.

NOTE.

To all the medicated wines, after they have been ſtrained, you may add about one-twentieth of their quantity of proof ſpirit, to preſerve them from fermentation. They may be conveniently kept in the ſame kind of glaſs bottles that wines generally are for common uſes, which ſhould likewiſe be corked with the ſame care [*L.*]

VINUM ALOETICUM ALKALINUM.

Alkaline aloetic wine.

Lond.

Take of
- Any fixt alkaline ſalt, eight ounces;
- Socotorine aloes,
- Saffron,
- Myrrh, each one ounce;
- Sal ammoniac purified, ſix drams;
- Mountain wine, two pints.

Macerate without heat for a week or longer; then filter the wine through paper.

This is the Elixir proprietatis Helmontii, with ſome litttle variations, which affect the compounder rather than the compoſition. It is obſervable, that the ſal ammoniac is decompounded in this proceſs, after the ſame manner as in the diſtillation of the *ſpiritus ſalis ammoniaci* (ſee chap. viii. ſect. 2.) its acid being abſorbed by, and neutralizing a part of, the fixt alkali, and its volatile alkaline ſalt being ſet at liberty; ſo that the reſult is the ſame as if as much pure volatile ſalt were added as the ſal ammoniac is capable of affording, viz. near half an ounce, with about ſix drams of marine ſalt.

Helmont's elixir, in a preceding pharmacopœia, is thus directed:

Take of
Red tartar,
Nitre, each twelve ounces;
White wine, two pints;
Aloes,
Saffron, each an ounce and a half.
Let the nitre and tartar be reduced into powder, and the mixture thrown by degrees into an hot crucible: when ſufficiently calcined, pour the matter into a glaſs mortar, and add the wine, ſo as to make a ley thereof; with which ley, a tincture is to be drawn from the aloes and ſaffron.

Take of
Sal ammoniac, eight ounces;
Spring water, twenty ounces;
White wine, one pint;
Myrrh, an ounce and a half.
Diſſolve the ſal ammoniac in the water, ſtrain the ſolution, and evaporate it to dryneſs. One ounce of this dry ſalt is to be diſſolved in the wine; and with this ſolution, draw a tincture from the myrrh.
Mix both tinctures together, in a cloſe veſſel, ſo as to make them into an elixir.

The preparation made after this troubleſome method, is not different from the foregoing. The nitre and tartar, when calcined together, form an alkaline ſalt, ſimilar to thoſe which the ſhops are ſupplied with at a cheaper rate.

Helmont and others have entertained a very high opinion of this medicine, and looked upon it as "a vivifying and preſerving balſam, capable of continuing health and prolonging life to the utmoſt poſſible limits." The medicine is doubtleſs a very efficacious and uſeful one for many purpoſes: it may be ſo managed as to attenuate viſcid juices, and open obſtructions in the remoter parts, and promote evacuation by almoſt all the emunctories. In doſes of one, two, or three drams, it increaſes the urinary ſecretion; and if the patient be kept moderately warm, generally proves diaphoretic or ſudorific; in larger doſes, it gently looſens the belly.

VINUM AMARUM.

Bitter wine.

Lond.

Take of
Gentian root,
Yellow rind of lemon peel, freſh, each one ounce;
Long pepper, two drams;
Mountain wine, two pints.
Macerate without heat, and ſtrain out the wine for uſe.

This is a very elegant bitter, which the addition of the long pepper renders conſiderably warmer than the watery infuſion. Gentian and lemon peel, as we have already ſeen, make a bitter of a very grateful flavour: "the ſpice here added was ſelected after the trial of many other materials."

VINUM ANTIMONIALE.

Antimonial Wine.

Lond.

Take of
- Crocus of antimony, waſhed, one ounce;
- Mountain wine, a pint and a half.

Digeſt without heat, filter the wine through paper.

Edinb.

Take of
- Crocus metallorum, one ounce;
- Mountain wine, fifteen ounces.

Stir them well together; then let the mixture ſtand till it has perfectly ſettled, and carefully pour off the wine.

However carefully the ſettling and decantation be performed, the filtration of the wine through paper appears to be neceſſary, leſt ſome of the finer parts of the crocus ſhould chance to remain ſuſpended in ſubſtance. It is not here, as in moſt other wines and tinctures, where the matter left undiſſolved by the menſtruum is of little conſequence: the antimonial crocus, after the action of the wine, continues as virulent as ever, and capable of impregnating freſh parcels of the liquor as ſtrongly as the firſt, and this, in appearance, inexhauſtibly; yet, after thirty repeated infuſions, it has been found ſcarce ſenſibly diminiſhed in weight.

The antimonial wine poſſeſſes the whole virtues of that mineral, and may be ſo doſed and managed, as to perform all that can be effected by any antimonial preparation: with this advantage, that as the active part of the antimony is here already diſſolved and rendered miſcible with the animal fluids, its operation is more certain. Given from ten to fifty or ſixty drops, it acts generally as an alterative and diaphoretic; in larger doſes, as a diuretic and cathartic: whilſt three or four drams prove for the moſt part violently emetic. It has been chiefly uſed in this laſt intention, in ſome maniacal and apoplectic caſes; and hence gained the name of emetic wine.

* VINUM E TARTARO ANTIMONIALI.

Emetic tartar wine.

Edinb.

This is made by diſſolving twenty-four grains of emetic tartar in one pound of white wine.

VINUM CHALYBEATUM.

Steel wine.

Lond.

Take of
- Iron filings, four ounces;
- Cinnamon,
- Mace, each half an ounce;
- Rheniſh wine, four pints.

Macerate without heat for a month, frequently ſhaking the veſſel, and ſtrain off the wine for uſe.

Edinb.

Take of
- Iron filings, three ounces;
- Cochineal, half a dram:
- Rheniſh wine, two pints.

Digeſt them together for twenty days, frequently ſhaking the veſſel, and then paſs the wine through a filter.

Both theſe wines are ſufficiently elegant ones. Rheniſh is an excellent menſtruum for ſteel, and diſſolves a conſiderable quantity of it; the cochineal, in the ſecond, imparts a fine colour; and the ſpices, in the firſt, give the liquor an agreeable flavour, make it ſit eaſier on the ſtomach, and likewiſe promote its medicinal efficacy. In a preceding edition of the Edinburgh pharmacopœia, the digeſtion was ordered to be performed in a ſand-heat, continued for ten days. Some have objected to the uſe of heat, that it impregnated the wine more ſtrongly with the metal, and thus rendered it more unpleaſant to the taſte: but if this were the only inconvenience, the remedy would be eaſy, of diluting it with more wine. Heat has another effect, much leſs deſirable, and which art cannot remedy; making a diſagreeable alteration in the quality of the wine itſelf.

Steel wine is a very uſeful preparation of this metal, and frequently exhibited in chlorotic and other indiſpoſitions where chalybeates are proper. Boerhaave recommends it as one of the nobleſt medicines he was acquainted with, for promoting that power in the body by which blood is made, when weakened by a bare debility of the over-relaxed ſolids, and an indolent, cold, aqueous indiſpoſition of the juices: for in this caſe, ſays he, no virtue of any vegetable or animal ſubſtance, no diet nor regimen can effect that, which is effected by iron: but it proves hurtful, where the vital powers are already too ſtrong, whether this proceed from the fluids or the ſolids. The doſe is from a dram to half an ounce; which may be repeated two or three times a day.

Some direct ſolutions of iron, made in wine or other vegetable acids, to be evaporated to the conſiſtence of an extract, under the title of Extractum martis. Theſe preparations have no advantage, in point of virtue, above the common chalybeates; though in ſome form, that of pills in particular, they may be rather more commodiouſly exhibited, than moſt of the officinal chalybeates of equal efficacy. They may be made into pills by themſelves, and are tenacious enough to reduce other ſubſtances into that form.

VINUM CROCEUM.

Saffron wine.

Lond.

Take of
  Saffron, one ounce;
  Canary, one pint.
Macerate without heat, and ſtrain off the wine.

Canary has been objected to by ſome, as an improper menſtruum for medicinal ſimples, ſince it contains a large quantity of unctuous matter, which impedes its diſſolving power; a pint of this ſort of wine left, upon evaporation, two ounces of a mellaginous ſubſtance, not unlike honey boiled hard. It is nevertheleſs, for ſaffron, a very well adapted menſtruum, as not only ſufficiently loading itſelf with its virtues, but likewiſe coinciding in the general intention of the medicine, that of a cordial. The preparation made with Canary is alſo better fitted for keeping, than when wines that have had any tendency to acidity are employed; for tinctures of ſaffron drawn with theſe laſt, ſoon loſe their fine colour; whilſt thoſe made with the firſt, retain it for a much longer time. The doſe of this tincture is from one dram to three or more.

VINUM IPECACUANHÆ.

Wine of ipecacuanha.

Lond.

Take of
  Ipecacuanha, two ounces;
  Yellow rind of Seville orange peel, dried, half an ounce;
  Canary, two pints.
Macerate without heat, and ſtrain out the wine.

TINCTURA IPECACUANHÆ.

Tincture of ipecacuanha.
Edinb.

Take of
Ipecacuanha, in powder, one ounce;
Mountain wine, fifteen ounces.
After three days digeſtion, let the tincture be filtered for uſe.

Both theſe wines are very mild and ſafe emetics, and equally ſerviceable, in dyſenteries alſo, with the ipecacuanha in ſubſtance; this root yielding nearly all its virtues both to the mountain and Canary wines here ordered, as it does a good ſhare of them even to aqueous liquors. The common doſe is an ounce, more or leſs, according to the age and ſtrength of the patient. The college of Edinburgh added formerly a ſcruple of cochineal, which imparts a fine red colour to the liquor. This article is now omitted, on a complaint, that the red colour of the matters evacuated, ſometimes alarmed the patient, as if it proceeded from a diſcharge of blood.

VINUM VIPERINUM.

Viper wine.
Lond.

Take of
Dry vipers, two ounces;
Mountain, three pints.
Macerate with a gentle heat for a week, and then ſtrain off the wine.

It has been diſputed, whether live or dry vipers are preferable for making this medicine. Such as are moderately and newly dried, are perhaps the moſt eligible, ſince by exſiccation they ſeem to loſe only their phlegmatic or aqueous parts. Whether they communicate to the wine, either when uſed freſh or dry, ſo much virtue as they are ſuppoſed to do, is greatly to be doubted. Some compoſitions under this name have been highly celebrated, as reſtoratives, in debilities and decays of conſtitution; but what virtues of this kind they poſſeſſed, were ſupplied chiefly from other ingredients.

VINUM MILLEPEDARUM.

Wine of millepedes.
Edinb.

Take of
Live millepedes, bruiſed, two ounces;
Rheniſh wine, one pound.
Infuſe them together for a night, and afterwards preſs the liquor through a ſtrainer.

This wine has been commended as an admirable cleanſer of all the viſcera, yielding to nothing in the jaundice, and obſtructions of the kidneys or urinary paſſages, of excellent ſervice in almoſt all chronical diſtempers, even in ſcrophulous and ſtrumous ſwellings, and in defluxions of rheum upon the eyes. But thoſe who expected theſe extraordinary virtues from it, have often been deceived; and, at preſent, there are few who have any great dependence on it. It is directed to be given from half an ounce to two ounces.

TINCTURA CEPHALICA.

Cephalic tincture.
Edinb.

Take of
Wild valerian root, four ounces;
Virginian ſnakeroot, one ounce;
Roſemary tops, half an ounce;
French white wine, ſix pints.
Digeſt them together for three days, and then filter the tincture.

This preparation promiſes to be a medicine of conſiderable utility as a cephalic, that is, in diſorders of the nervous ſyſtem, wherein the membranes of the brain are often principally affected, as in vertiginous, epileptic, and paralytic complaints. The compoſition is improved from former editions, by the rejection of ſome ingredients, of which the beſt were ſuperfluous; viz. caſumunar, white dittany roots, peony roots, miſletoe of the oak, and peacocks dung. Caſumunar is doubtleſs an article of importance, but much inferior, in the preſent intention, to the ingredients now retained.

Here it may be proper to obſerve, that though ſome of the diſtilled waters, to be treated of hereafter, receive many ſupernumerary ingredients, without any conſiderable injury to the produce; yet in medicines prepared by infuſion, it is far otherwiſe. For there, ingredients, which give nothing over, do little harm: but as all thoſe commonly employed in infuſions communicate ſomething to the menſtruum; ſo, if ſuperfluous ones be admitted, they load the liquor with an uſeleſs matter, and occupy in it the place that ought to be poſſeſſed by the more efficacious.

TINCTURA CEPHALICA PURGANS.

Purging cephalic tincture.

Edinb.

This is made by adding to the foregoing, of
- Sena, two ounces;
- Black hellebore roots, one ounce;
- French white wine, two pints.

Purgatives are often very neceſſary additions to medicines of the foregoing claſs. Thoſe here made choice of are well adapted to the purpoſe, and in ſuch quantity as to make the wine gently laxative in doſes of two ounces.

TINCTURA RHABARBARI VINOSA.

Vinous tincture of rhubarb.

Lond.

Take of
- Rhubarb, two ounces;
- Leſſer cardamom ſeeds, freed from the huſks, half an ounce;
- Saffron, two drams;
- Mountain wine, two pints.

Macerate without heat, and then ſtrain off the tincture.

This is a warm, cordial, laxative medicine. It is uſed chiefly in weakneſs of the ſtomach and bowels, and ſome kinds of looſeneſſes, for evacuating the offending matter, and ſtrengthening the tone of the viſcera. It may be given from half a ſpoonful to three or four ſpoonfuls or more, according to the circumſtances of the diſorder, and the purpoſes it is intended to anſwer.

TINCTURA SACRA.

Lond.

Take of
- Socotorine aloes, eight ounces;
- Canella alba, two ounces;
- Mountain wine, ten pints.

Reduce the aloes and canella ſeparately into powder, then mix, and pour on them the wine; afterwards macerate without heat, for a week or longer, occaſionally ſhaking the veſſel; laſtly, ſtrain off the wine.

It will be convenient to mix with the powders ſome white ſand, well waſhed from dirt, to prevent the aloes from concreting, which it is apt to do upon being moiſtened.

Edinb.

Take of
- Socotorine aloes, one ounce;

The leſſer cardamom ſeeds,
Ginger, of each one dram ;
White wine, two pounds.
Digeſt for ſeven days, often ſhaking the veſſel, and ſtrain off the tincture.

This medicine has long been in great eſteem, not only as a cathartic, but likewiſe as a ſtimulus ; the wine diſſolving all that part of the aloes in which theſe qualities reſide, a portion only of the leſs active reſinous matter being left. The aromatic ingredients are added, to warm the medicine, and ſomewhat alleviate the ill flavour of the aloes. Canella alba, or cloves, are ſaid, among numerous materials that have been made trial of, to anſwer this end the moſt ſucceſsfully. The ſnakeroot*, in the ſecond of the above preſcriptions, ſeems deſigned for promoting the ſtimulating virtue of the aloes, and thus extending its action to further purpoſes than it is by itſelf capable of. Probably in the ſame intention, aſarum was made an ingredient in our former pharmacopœias : in a preceding edition of this work, the tincture is directed as follows :

Take of
Aloes, eight ounces ;
Aſarum,
Cinnamon,
Zedoary,
Cardamom ſeeds,
Saffron, each four drams ;
Cochineal, a ſcruple ;
Mountain wine, ten pints.
Pour the wine on the other ingredients reduced into powder, digeſt them together, and afterwards ſtrain off the tincture for uſe.

The *tinctura ſacra* appears, from long experience, to be a medicine of excellent ſervice in languid, phlegmatic habits, not only for cleanſing the primæ viæ, but likewiſe for attenuating and diſſolving viſcid juices in the remoter parts, for ſtimulating the ſolids, warming the habit, promoting or exciting the uterine purgations, and the hæmorrhoidal flux. The doſe, as a purgative, is from one to two ounces, or more : it may be introduced into the habit, ſo as to be productive of excellent effects, as an alterant, by giving it in ſmall doſes, at proper intervals ; thus managed, it does not for a conſiderable time operate remarkably by ſtool ; but at length proves purgative, and occaſions a lax habit, of much longer continuance than that produced by the other common cathartics.

TINCTURA AD STOMACHICOS.

Stomachic tincture.

Edinb.

Take of
Calamus aromaticus,
Gentian root, each one ounce and a half ;
Peruvian bark, in powder, two ounces ;
Curaſſoa oranges,
Leſſer centaury tops,
Carduus benedictus ſeeds, each one ounce ;
Iron filings (to be tied up in a bag) three ounces ;
French white wine, one gallon.
Digeſt for the ſpace of three days, and then filter the tincture.
This tincture may likewiſe be made without the iron.

This tincture is a very efficacious medicine in weakneſs of the ſtomach and chylopoietic organs, and in a lax flaccid ſtate of the viſcera in general. It is here rendered much more elegant and grateful than as it ſtood in former editions, by the rejection of ſome exceptionable ingredients, as galangal,

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* Omitted in the laſt edition of the *Edinb.*

langal, zedoary, camomile, and wormwood. The carduus ſeeds and centaury tops might ſtill perhaps be ſpared without injury, as they do not ſeem to have any virtues which gentian root does not poſſeſs in a greater degree. The Seville orange peel of former editions is here exchanged for the unripe young fruit of the orange tree, called Curaſſao oranges, an article well adapted to compoſitions of this kind, being an aromatic bitter of a very agreeable flavour.

TINCTURA THEBAICA.

Thebaic tincture.

Lond.

Take of
Strained opium, two ounces;
Cinnamon,
Cloves, each one dram;
Mountain wine, one pint.
Macerate without heat for a week, and then filter the tincture through paper.

THIS is the LIQUID LAUDANUM of SYDENHAM, with the exchange of Canary wine for mountain, and the omiſſion of an ounce of ſaffron. The aromatics in the form above are in ſo ſmall quantity, that the preſcriber can ſcarce expect any conſiderable effect from them, the proportion of each that goes to a grain of opium, amounting to no more than the ſixteenth part of a grain. Even theſe minute proportions, however, are in good meaſure ſufficient to take off the ill odour of the opium, which ſeems to be all that is intended by them.

The principal advantages of exhibiting opium in this form are, that by being already diſſolved, it exerts itſelf the ſooner in the body; and that by ſome perſons, liquids are more commodiouſly taken, than a bolus or pill. The common doſes of the tincture are from ten drops to forty, fifty, or more, according to the exigencies of the caſe. It were to be wiſhed, that the doſe could be more exactly aſcertained, by weight or meaſure; as the drops may, according to different circumſtances, vary in quantity, though in number the ſame; and as an error therein may, in ſome caſes, be of miſchievous conſequence. Twenty drops contain, at a medium, about one grain of opium, or rather, ſo much as that quantity of wine will extract from one grain; for the liquor does not diſſolve the whole ſubſtance of the opium, nor is the ſolution equivalent, in its effect, to the full quantity of opium employed in it.

A liquid opiate, free from the inconveniencies here complained of, will be deſcribed under the head of ſpirituous tinctures.

VINUM AROMATICUM.

Aromatic wine.

Take of
Cloves,
Ginger, each half an ounce;
Cinnamon,
Nutmegs, each one ounce;
Canary wine, ſix pints.
Beat the ſpices into a coarſe powder, and ſteep them in the wine for ſome days; then paſs the liquor through a ſtrainer.

THIS wine is a very high cordial, and greatly commended for warming the habit and ſtrengthening the nervous ſyſtem. It is ſo hot of the ſpices as to require being diluted for uſe, and to be taken only in ſmall quantities at a time. Mixed with a little lemon juice, and a large proportion of milk, it forms a pleaſant and uſeful whey in low fevers.

VINUM ANTISCORBUTICUM.

Antiſcorbutic wine.

Paris.

Take of
Leaves of Buckbean,
Water-creſſes,
Brooklime,
Dittander,
Scurvy-graſs,
Jack-by-the-hedge,
Roots of horſeradiſh, each one ounce;
Florence orris, two drams;
White wine, half a gallon.

The herbs and roots, all freſh gathered and cut ſmall, are to be ſteeped in the wine, in a veſſel very cloſely ſtopt, for twenty-four hours; after which the wine is to be filtered for uſe.

THIS compoſition is not ill contrived for anſwering the purpoſe expreſſed by its title; though ſome of the ingredients are not unexceptionable. An ounce of the herbaceous brooklime is altogether inſignificant in half a gallon of an infuſion of ſuch powerful materials; and it may be doubted whether the freſh orris root communicate any of its virtues to the liquor. The roots of the Florentine, as well as of the common orris, raiſed in our gardens, are, while freſh, ſtrong purgatives; but their purgative matter is ſo little diſpoſed to ſolution in watery menſtrua, that it ſeparates from the expreſſed juices and ſettles to the bottom. In drying they change their nature; and the Florentine ſpecies, in a dry ſtate, might be an uſeful addition, for giving an agreeable flavour to the wine. The flavour which this root communicates to vinous liquors, greatly reſembles that of raſpberries.

VINUM SCORBUTICUM.

Scorbutic wine.

Take of
Garden ſcurvy-graſs, one handful;
Horſeradiſh root, ſcraped, half an ounce;
Winter's bark, two drams;
Mountain wine, two pints.

Let them ſteep together in the cold for three days.

THIS wine is ſo far impregnated with the virtues of the ingredients, as to do conſiderable ſervice in ſcorbutic habits. It is uſed chiefly in the ſpring, in the quantity of a common wine glaſs, two or three times a day. Though far more ſimple than the preceding, it is not perhaps leſs efficacious.

VINUM SCORBUTICUM MUNTINGII.

Muntingius's ſcorbutic wine.

Take of
The roots of the greater water-dock, ſix ounces;
Gentian root,
Liquorice,
Cinnamon,
Black pepper,
Mace, each three ounces;
Saffron, two ounces;
Mountain wine, ſixteen pints;
Strong vinegar, four pints;
Yolks of three freſh eggs.

Reduce the roots and ſpices into a groſs powder, and pour on them the wine, vinegar, and yolks of eggs. Digeſt the whole in a cloſe veſſel, with a gentle warmth, for three days; and then ſtrain out the liquor for uſe.

THE author of this compoſition recommends it as a medicine of infallible efficacy againſt inveterate ſcurvies, and all kinds of ſcorbutic complaints, particularly ſuch as are not accompanied with a fever or inflammation: even palſies, and the venereal lues, he ſays, have yielded to it. The doſe is from three to ſix ounces, to be taken in the morning on an empty ſtomach, and continued for fourteen or twenty days, or longer: ſome quantity of it is likewiſe to be mixed with the patient's common drink, which he directs to be either good Rheniſh wine, or ſound malt liquors not too new. If the patient complain of heat, dryneſs, a violent cough, or where there are any ſymptoms of a conſumption, the black pepper is ordered to be omitted, and the liquorice increaſed in its room to ſix ounces.

A compoſition differing from the above only in the omiſſion of vinegar, and employing ſpirit of wine for the menſtruum, is ſaid to have come into eſteem at Paris, againſt the gout.

VINUM FEBRIFUGUM.
Febrifuge wine.
Paris.

Take of
Peruvian bark, in powder, two ounces;
Rough red wine, two pints.
Digeſt them together in a circulatory veſſel, with a moderate heat, for forty-eight hours, occaſionally ſhaking the veſſel: then ſuffer the whole to cool, and paſs the wine through a ſtrainer.

THIS is the preparation of bark made uſe of by ſir Robert Tabor or Talbot (an Engliſh gentleman reſiding in France) who was one of the firſt that retrieved the character of the medicine itſelf, at the time that ſome ill conſequences following its imprudent uſe had brought it into diſeſteem. He kept this preparation a ſecret, till Lewis XIV. purchaſed it for a conſiderable ſum, and communicated it to the public. It was not however the preparation, but a proper method of managing the medicine, upon which the ſucceſs of his practice depended. See page 197. It appears from experience, that this wine is leſs certain in the cure of agues, than the bark given in ſubſtance; nor is it equal, in this intention, for general uſe, to the watery infuſion deſcribed in page 271; the wine preventing its being taken ſo freely as is in many caſes requiſite. It nevertheleſs has its uſes, in thoſe intermittent fevers where a large quantity of the bark is not neceſſary; and is particularly ſerviceable in a laxity and debility of the ſtomach and inteſtines.

VINUM GUAIACINUM.
Guaiacum wine.

Take of
Guaiacum wood,
Yellow ſaunders, each two ounces;
Orange peel, dried,
Leſſer cardamom ſeeds, each one ounce;
Mountain wine, one gallon
Let them ſteep together for a week, and then ſtrain out the wine for uſe.

THIS is a moderately warm and corroborating wine. It is uſed in nervous weakneſſes, in decays of conſtitution from cold pituitous humours; and proves an uſeful preſervative againſt rheumatic and arthritic complaints. Two ounces, or an ordinary wine glaſs, may be taken two or three times a day, and continued for a month or two.

VINUM GUAIACINUM CUM HELLEBORO.
Guaiacum wine with hellebore.

Take of
Guaiacum wood,
Black hellebore root, each two ounces;
Leſſer cardamon ſeeds,

Orange peel, dried, each one ounce;
Mountain wine, four pints.

Let theſe ingredients ſteep together for a week or longer, and then ſtrain out the wine for uſe.

From the warm, ſtimulating, deobſtruent qualities of this wine, it may be uſed, to good advantage, in cold phlegmatic habits, where the humours ſtagnate in the remote veſſels, and where there is a diſpoſition to gouty, rheumatic, or hydropic diſorders. It is to be taken chiefly over night, in ſuch ſmall doſes as not to run off by ſtool.

SECT. V.

Ales.

Medicated ales are intended as diet-drinks in chronical indiſpoſitions. There are two ways, of impregnating malt-liquors with the virtues of medicinal ſubſtances; macerating the ſubject in the liquor after the fermentation is completely finiſhed; and fermenting it along with the liquor, or at leaſt adding it towards the end of the fermentation, that, by the reſolutive power of that proceſs, its texture may be opened, and its medicinal parts more fully extracted. Neumann obſerves, that the active powers of many vegetables are not only effectually extracted, but extended, as it were, by fermentation: that ſo much pounded nutmeg, as will lie on the point of a knife, gives a flavour to a large vat of fermenting ale; whereas, when the fermentation is finiſhed, the quantity of liquor to which it gives a like impregnation, is comparatively inconſiderable.

Cerevisia amara.

Bitter Ale.

Take of
Gentian root,
Lemon peel, freſh, each four ounces;
Long pepper, one ounce;
Ale, one gallon.

Let them ſteep together without heat.

This is an agreeable bitter ſtomachic ale, much ſuperior to the common purls, or any of the compoſitions of this kind in the extemporaneous recipe writers.

Cerevisia aperiens.

Aperient Ale.

Take of
Muſtard ſeed, unbruiſed, ten ounces;
Long birthwort root, ſix ounces;
Leſſer centaury tops, two ounces;
Savin tops, one ounce;
New ſmall ale, ten gallons.

This is an uſeful aperient diet-drink in cachectic and chlorotic indiſpoſitions, and in all caſes where obſtructions begin to form in the viſcera. It is to be taken, to the quantity of half a pint at a time, twice a day.

Cerevisia Butleri.

Dr. Butler's ale.

Take of
Betony,
Sage,
Agrimony,
Garden ſcurvy-graſs,

Roman wormwood, each three handfuls;
Elecampane roots,
Horſeradiſh roots, each four ounces;
New ale, four gallons.

The herbs and roots are to be put in a bag, and hung in the ale while it works.

THIS liquor has ſo far obtained among the common people, as to have been frequently made and ſold in public houſes. It is uſed in the ſpring, for purifying the blood, and preventing ſcorbutic diſorders.

CEREVISIA CEPHALICA.

Cephalic ale.

Take of
Wild valerian root, ten ounces;
Muſtard ſeed, whole, ſix ounces;
Virginian ſnakeroot, two ounces;
Roſemary, or ſage, three ounces;
New ſmall ale, ten gallons.

THE ingredients of this compoſition are all of the warm and ſtimulating kind; and conſequently tend to invigorate the nervous ſyſtem, and promote the circulation of the fluids. In palſies, epilepſies, and vertigoes, ſome benefit may be expected from this liquor uſed as common drink.

CEREVISIA DIURETICA.

Diuretic ale.

Take of 1.
Muſtard ſeed, whole,
Juniper berries, each eight ounces;
Wild carrot ſeeds, three ounces;
Common wormwood, two ounces;
New ſmall ale, ten gallons.

Take of 2.
Broom tops,
Muſtard ſeed, each ſixteen ounces;
Flower-de-luce roots,
Sharp-pointed dock roots, each twelve ounces;
Winter's bark,
Elder bark,
Wild carrot ſeeds,
Juniper berries, each two pounds;
New ale, twelve gallons.

IN hydropic caſes, and corpulent ſcorbutic habits, theſe aperient and diuretic liquors are very uſeful diet-drinks. Half a pint of either may be taken two or three times a day.

CEREVISIA AD SCORBUTICOS.

Scorbutic ale.

Take of
Horſeradiſh root, freſh, one pound;
Sharp-pointed dock roots, half a pound;
Canella alba, two ounces;
Buckbean leaves, freſh, eight ounces: or dried, three ounces;
New ſmall ale, ten gallons.

IN ſcorbutic diſorders, and impurities of the blood and juices, this liquor, uſed as common drink, generally does good ſervice. All the ingredients are very effectual for the intention, and well ſuited to the form. If the ſharp-pointed dock roots were exchanged for thoſe of the great water dock, the compoſition would be ſtill more powerful.

SECT. VI.

Spirituous Tinctures.

RECTIFIED ſpirit of wine is the direct menſtruum of the reſins and eſſential oils of vegetables; and totally extracts theſe active principles from ſundry vegetable matters, which yield them to water either not at all, or only in part. It diſſolves likewiſe the ſweet ſaccharine matter of vegetables; and generally, thoſe parts of animal bodies, in which their peculiar ſmells and taſtes reſide.

The virtues of many vegetables are extracted almoſt equally by water and rectified ſpirit; but in the watery and ſpirituous tinctures of them there is this difference, that the active parts, in the watery extractions, are blended with a large proportion of inert gummy matter, on which their ſolubility in this menſtruum in great meaſure depends, while rectified ſpirit extracts them almoſt pure from gum. Hence, when the ſpirituous tinctures are mixed with watery liquors, a part of what the ſpirit had taken up from the ſubject generally ſeparates and ſubſides, on account of its having been freed from that matter which, being blended with it in the original vegetable, made it ſoluble in water. This however is not univerſal; for the active parts of ſome vegetables, when extracted by rectified ſpirit, are not precipitated by water, being almoſt equally diſſoluble in both menſtrua.

Rectified ſpirit may be tinged by vegetables of all colours, except blue. The leaves of plants in general, which give out but little of their natural colour to watery liquors, communicate to ſpirit the whole of their green tincture, which for the moſt part proves elegant, though not very durable.

Fixt alkaline ſalts deepen the colour of ſpirituous tinctures; and hence have been ſuppoſed to promote the diſſolving power of the menſtruum, though this does not appear from experience: in the trials that have been made to determine this affair, no more was found to be taken up in the deep coloured tinctures, than in the paler ones, and often not ſo much; if the alkali be added after the extraction of the tincture, it will heighten the colour as much as when mixed with the ingredients at firſt. Nor is the addition of theſe ſalts, in making tinctures, uſeleſs only, but likewiſe prejudicial, as they, in general, injure the flavour of aromatics, and ſuperadd a quality, ſometimes contrary to the intention of the medicine. Volatile alkaline ſalts, in many caſes, promote the action of the ſpirit. Acids generally weaken it; unleſs when the acid has been previouſly combined with the vinous ſpirit into a compound of new qualities, called dulcified ſpirit.

General rules for extracting tinctures; from the Edinburgh Pharmacopœia.

I.

The vegetable ſubſtances ought to be moderately and newly dried, unleſs they are expreſsly ordered otherwiſe. They ſhould likewiſe be cut and bruiſed, before the menſtruum is poured on them.

II.

If the digeſtion be performed in balneo, the whole ſucceſs depends upon a proper management of the fire: it ought to be all along gentle, unleſs the hard texture of the ſubject ſhould require it to be augmented; in which caſe the heat may be increaſed ſo as to make the menſtruum boil a little, towards the end of the proceſs.

III.

Very large circulatory veſſels ought to be employed for this purpoſe, which ſhould be heated before they are luted together.

Circulatory veſſels are thoſe, which are ſo contrived, and of ſuch a height, that the vapour, which ariſes during the digeſtion, may be cooled and condenſed in the upper part, and fall down again into the liquor below: by theſe means the diſſipation, both of the ſpirit and of the volatile parts of the ingredients, is prevented. They are generally compoſed of two long-necked matraſſes or boltheads; the mouth of one of which is to be inſerted into that of the other, and the juncture ſecured by a piece of wet bladder. The uſe of heating the veſſels is to expel a part of the air; which otherwiſe, rarifying in the proceſs, would endanger burſting them, or blowing off the uppermoſt matraſs. A ſingle matraſs with a long neck, or with a glaſs pipe inſerted into its mouth, is more commodious than the double veſſel. See page 44.

IV.

The veſſel is to be frequently ſhaken during the digeſtion.

V.

All tinctures ſhould be ſuffered to ſettle before they are committed either to the filter or ſtrainer.

VI.

In the tinctures (and diſtilled ſpirits likewiſe) deſigned for internal uſe, no other ſpirit (drawn from malt, melaſſes, or other fermented matter) is to be uſed, than that expreſsly preſcribed.

VII.

Reſins and reſinous gums yield tinctures more ſucceſsfully, if, after being ground into powder, they be mixed with ſome white ſand, well waſhed and dried, which will prevent their running into lumps by the heat. If the powders preſcribed be ſufficient for this purpoſe, ſuch an addition is unneceſſary.

TINCTURA AMARA.

Bitter tincture.

Lond.

Take of
- Gentian root, two ounces:
- Yellow rind of Seville orange peel, dried, one ounce;
- Leſſer cardamom ſeeds, freed from the huſks, half an ounce;
- Proof ſpirit, two pints.

Digeſt without heat, and ſtrain off the tincture.

This is a very elegant ſpirituous bitter. As the preparation is deſigned for keeping, lemon peel, an excellent ingredient in the watery bitter infuſions, has, on account of the periſhableneſs of its flavour, no place in this. The cardamom ſeeds are here a very commodious ingredient, as in this ſpirituous menſtruum they are free from the inconvenience with which they are attended in other liquors, of rendering them untranſparent. The Edinburgh pharmacopœia has a compoſition ſimilar in intention to this, under the title of

ELIXIR STOMACHICUM.

Stomachic elixir.

Take of
- Gentian root, two ounces;
- Curaſſao oranges, one ounce;
- Virginian ſnakeroot, half an ounce;
- Cochineal, half a dram;
- French brandy, two pints.

Let them ſteep for three days, and then filter the elixir.

This elixir differs from that of former editions, in the ſubſtitution of Curaſſao oranges to freſh orange peel, and in the addition of half an ounce of Virginian ſnakeroot. The firſt is a grateful aromatic bitter, and the latter ſuperadds a degree of pungency coinciding with the intention. Both this and the preceding compoſition are very uſeful ſtomachic bitters.

TINCTURA AROMATICA.

Aromatic tincture.

Lond.

Take of
- Cinnamon, ſix drams;
- Leſſer cardamom ſeeds, freed from the huſks, three drams;
- Long pepper,
- Ginger, each two drams;
- Proof ſpirit, two pints.

Digeſt without heat, and then ſtrain off the tincture.

This is a very warm aromatic, too much ſo to be given without dilution. A tea ſpoonful or two may be taken in wine, or any other convenient vehicle, in languors, weakneſs of the ſtomach, flatulencies, and ſimilar complaints. The ſtomachic tincture deſcribed hereafter, is ſimilar in intention to this, but contrived leſs hot of the ſpices, that it may be taken by itſelf.

* TINCTURA AROMATICA.

Aromatic tincture.

Edinb.

Take of
- Cinnamon, ſix drams;
- Leſſer cardamom ſeeds, one ounce;
- Garden angelica root, three drams;
- Long pepper, two drams;
- Proof ſpirit, two pounds and an half.

Macerate ſeven days, and filter.

This preparation is improved from the preceding editions, by the omiſſion of ſome articles either ſuperfluous or foreign to the intention; galangal, gentian, zedoary, and bayberries. As now reformed, it is a ſufficiently elegant warm aromatic.

TINCTURA BALSAMICA.

Balſamic tincture.

Edinb.

Take of
- Balſam of Copaiba, one ounce and a half;
- Balſam of Peru, half an ounce;
- Engliſh ſaffron, one dram;
- Rectified ſpirit of wine, one pint.

Digeſt theſe ingredients together, in a ſand heat, for three days; and, then, paſs the tincture thro' a ſtrainer.

This tincture is an excellent balſamic, both for internal and external purpoſes. It is uſually given, in doſes of ten, twenty, or thirty drops, in the fluor albus, gleets, cachexies, ſome kinds of aſthmas, and nephritic complaints, for ſtrengthening the tone of the viſcera, and corroborating the nervous ſyſtem in general. Some caution is requiſite in the uſe of theſe reſinous warm medicines: in cold, languid, phlegmatic habits, they have for the moſt part good effects; but in bilious and plethoric conſtitutions, where there is any tendency to inflammation, or immoderate heat, they are manifeſtly prejudicial, and raiſe or continue febrile ſymptoms.

TINCTURA CANTHARIDUM.

Tincture of cantharides.

Lond.

Take of
Cantharides, bruiſed, two drams;
Cochineal, half a dram;
Proof ſpirit, a pint and a half.
Digeſt them together, and afterwards filter the tincture through paper.

Edinb.

Take of
Cantharides, one dram;
Proof ſpirit, one pound.
Digeſt four days, and filter.

These tinctures poſſeſs the whole virtues of the fly, and are the only preparations of it deſigned for internal uſe; tinctures being by far the moſt commodious and ſafe form for the exhibition of this active drug. If any additional ſubſtances ſhould be thought requiſite for promoting the effect of the cantharides, whether as a diuretic, as a detergent in ulcerations of the urinary paſſages, or as a ſpecific reſtringent of ſeminal gleets and the fluor albus, they are more advantageouſly joined extemporaneouſly to the tincture, or interpoſed by themſelves at proper intervals. The uſual doſe of theſe tinctures is from ten to twenty drops, which may be taken in a glaſs of water, or any other more agreeable liquor, twice a day; and increaſed by two or three drops at a time, according to the effect.

TINCTURA CARDAMOMI.

Tincture of cardamoms.

Lond.

Take of
Leſſer cardamom ſeeds, huſked, half a pound;
Proof ſpirit, two pints.
Digeſt without heat, and ſtrain the tincture.

Tincture of cardamoms has been in uſe for a conſiderable time, though now firſt received into the diſpenſatory. It is a pleaſant, warm cordial, and may be taken, along with any proper vehicle, from a dram to a ſpoonful or two.

TINCTURA CASTOREI.

Tincture of caſtor.

Lond.

Take of
Ruſſia caſtor, powdered, two ounces;
Proof ſpirit, two pints.
Digeſt for ten days without heat, and ſtrain off the tincture.

Edinb.

Take of
Ruſſia caſtor, one ounce and an half;
Rectified ſpirit of wine, one pound;
Macerate for ſix days, and ſtrain.

An alkaline ſalt was formerly added in this laſt preſcription, which is here judiciouſly rejected, as being at leaſt an uſeleſs, if not a prejudicial ingredient. It has been diſputed, whether a weak or rectified ſpirit, and cold or warm digeſtion, be preferable for making this tincture. To determine this point, the following experiment has been brought. "Some fine Siberia caſtor having been infuſed in good "French brandy, without heat, "for twenty days, the tincture "proved very weak: on the ſame "individual caſtor (the magma or "reſiduum of the former tincture) "the ſame quantity of rectified "ſpirit was poured, as before of "brandy; and after a few hours "warm digeſtion, a tincture was "extracted much ſtronger than the "other." But this experiment is not ſatisfactory; the effects of the two menſtrua, and of heat, having been reſpectively compared in very different circumſtances. From the trials which I have made, it appears, that caſtor, macerated without heat, gives out its finer and moſt grateful parts to either ſpirit, more perfectly to the rectified; that heat enables both menſtrua to extract the greateſt part of its groſſer and more nauſeous matter; and that proof ſpirit extracts this laſt more readily than rectified.

The tincture of caſtor is recommended in moſt kinds of nervous complaints, and hyſteric diſorders: in the latter it ſometimes does ſervice, though many have complained of its proving ineffectual. The doſe is from twenty drops to forty, fifty, or more.

TINCTURA CASTOREI COMPOSITA.

Compound tincture of caſtor.

Edinb.

Take of

Ruſſia caſtor, one ounce;

Aſafetida, half an ounce;

Vinous ſpirit of ſal ammoniac, one pound.

Digeſt for ſix days in a cloſe-ſtopt phial, frequently ſhaking the veſſel; and then ſtrain the tincture.

This compoſition is a medicine of real efficacy, particularly in hyſterical diſorders, and the ſeveral ſymptoms which accompany them. The *volatile oily ſpirit*, here intended, is the ſecond of thoſe hereafter deſcribed under that title. It is an excellent menſtruum both for the caſtor and the aſafetida, and greatly adds to their virtues.

TINCTURA CINNAMOMI.

Tincture of cinnamon.

Lond.

Take of

Cinnamon, an ounce and a half;

Proof ſpirit, a pint.

Digeſt without heat, and ſtrain off the tincture.

The tincture of cinnamon poſſeſſes the reſtringent virtues of the cinnamon, as well as its aromatic cordial ones; and, in this reſpect, it differs from the diſtilled waters of the ſpice.

TINCTURA CORTICIS PERUVIANI SIMPLEX.

Simple tincture of Peruvian bark.

Lond.

Take of

Peruvian bark, four ounces;

Proof ſpirit, two pints.

Digeſt and ſtrain.

A medicine of this kind has been for a long time pretty much in eſteem, and uſually kept in the ſhops, though but lately received into the diſpenſatory. Some have employed highly-rectified ſpirit of wine as a menſtruum; which they have taken care fully to ſaturate, by digeſtion on a large quantity of the bark. Others have thought to aſſiſt the action of the ſpirit, by the addition of a little fixt alkaline ſalt, which does not, however, appear to be of any advantage; and others have given the preference to the vitriolic acid, which was ſuppoſed, by giving a greater conſiſtence to the ſpirit, to enable it to ſuſtain more than it would be capable of doing by itſelf; at the ſame time that the acid improves the medicine, by increaſing the roughneſs of the bark. This laſt tincture, and that made with rectified ſpirit, have their advantages; though for general uſe, the above-directed is the moſt convenient of any, the proof ſpirit extracting nearly all the virtues of the bark. It may be given from a tea-ſpoonful to half an ounce, or an ounce, according to the different purpoſes it is intended to anſwer. See PERUVIANUS CORTEX.

TINCTURA CORTICIS PERUVIANI VOLATILIS.

Volatile tincture of Peruvian bark.

Lond.

Take of

Peruvian bark, four ounces;

Spirit of ſal ammoniac, two pints.

Digeſt without heat, in a veſſel cloſe ſtopt; and afterwards ſtrain the tincture.

THIS tincture is but lightly impregnated with the virtues of the bark; and is ſo acrimonious, that the largeſt doſe, which can with ſafety be given of it, can contain only a very ſmall quantity of the ſubject. The medicine nevertheleſs has its uſes, and may be ſerviceable in ſome caſes where the ſtronger are improper, as in difficulty of breathing, obſtructions, and oppreſſions of the breaſt. Stronger tinctures of this kind may be obtained by means of dulcified ſpirit of ſal ammoniac, or the ſpirit prepared with quicklime. All the three may be employed where a large quantity of bark is not required, as at the cloſe of the cure of intermittents, in weakneſs of digeſtion, attended with a cold ſenſation at the ſtomach, and ſome fluxes, particularly thoſe from the uterus, where the circulation is languid, the fibres relaxed, and where there is a periodical return of ſlight feveriſh complaints. In theſe caſes, I have often experienced ſalutary effects from a tincture in dulcified ſpirit of ſal ammoniac, given to the quantity of a tea ſpoonful five or ſix times a day, in any appropriated vehicles.

TINCTURA CORTICIS PERUVIANI. COMP.

Compound tincture of Peruvian bark.

Edinb.

Take of

Peruvian bark, in powder, three ounces;

Virginian ſnakeroot,

Gentian, each two drams;

French brandy, two pints.

Let them ſteep together for three days, and afterwards filter the tincture.

THE ſubſtances here joined to the bark, in many caſes, promote its efficacy in the cure of intermittents; and not unfrequently, are abſolutely neceſſary. In ſome bad habits, particularly where the juices are ſluggiſh and tenacious, the viſcera and abdominal glands obſtructed, the bark, by itſelf, proves unſucceſsful, if not injurious; whilſt, given in conjunction with corroborant ſtomachics and deobſtruents, it rarely fails of the due effect. Gentian and Virginian ſnakeroot are among the beſt additions for the purpoſe; to which it is often neceſſary to join chalybeate medicines alſo.

TINCTURA CROCI.

Tincture of ſaffron.

Edinb.

Take of
English ſaffron, one ounce;
Proof ſpirit, fifteen ounces;
Digeſt for ſeven days, and ſtrain.

This tincture is ſimilar in virtue to the ſaffron wine. A ſpirituous menſtruum is here preferred to the wine, as a tincture drawn with the former retains its elegant colour longer, and is not apt to depoſit, in keeping, any part of what it had taken up from the ſaffron. The ſhops have been accuſtomed to employ treacle water as a menſtruum for ſaffron, with a view to promote its efficacy in the intention of an alexipharmic; but the acid in that compound water ſoon deſtroys the colour of the tincture.

TINCTURA FŒTIDA.

Fetid tincture.

Lond.

Take of
Aſafetida, four ounces;
Rectified ſpirit of wine, two pints.
Digeſt and ſtrain.

This tincture, now received into the pharmacopœia, has been in uſe for a conſiderable time. It poſſeſſes the virtues of the aſafedita itſelf; and may be given from ten drops to fifty or ſixty. It was firſt propoſed to the college to be made with proof ſpirit: this diſſolves more of the aſafetida than a rectified one, but the tincture proves turbid; and therefore rectified ſpirit, which extracts a tranſparent one, is very juſtly preferred.

TINCTURA FULIGINIS.

Tincture of ſoot.

Lond.

Take of
Wood ſoot, two ounces;
Aſafetida, one ounce;
Proof ſpirit, two pints.
Digeſt and ſtrain.

Edinb.

Take of
Shining wood-ſoot, one ounce;
Aſafetida, half an ounce;
Rectified ſpirit of wine,
Proof ſpirit, of each half a pound.
Digeſt ſix days, and ſtrain.

The proof ſpirit is not liable to the ſame objection here as in the foregoing tincture; for when ſoot is added, whatever ſpirit be employed, the tincture will not prove tranſparent. Fuller, in his pharmacopœia domeſtica, has a medicine under the title of Hysteric tincture, ſimilar to theſe, only with a little myrrh, which is no very material addition to aſafetida and ſoot. Theſe medicines are found ſerviceable, not only in hyſteric caſes, but likewiſe in other nervous diſorders. They may be given from a tea-ſpoonful to a common ſpoonful twice a day.

TINCTURA GUAIACINA VOLATILIS.

Volatile tincture of guaiacum.

Lond.

Take of
Gum guaiacum, four ounces;
Volatile aromatic ſpirit, a pint and a half.
Digeſt, without heat, in a veſſel cloſe ſtopt; and afterwards let the tincture be paſſed through a ſtrainer.

This is a very elegant and efficacious tincture; the volatile ſpirit excellently diſſolving the gum, and, at the ſame time, promoting its medicinal virtue. In rheumatic caſes, a tea-ſpoonful, taken every morning and evening in any convenient vehicle, has proved of ſingular ſervice.

TINCTURA JALAPII.
Tincture of jalap.
Lond.

Take of
Jalap root, eight ounces;
Proof ſpirit, two pints.
After proper digeſtion, ſtrain off the tincture.

This tincture is an uſeful and mild purgative, the menſtruum, here employed, taking up ſo much of the gummy parts, as corrects the griping quality with which the reſin is attended. It may be taken by itſelf from a dram to half an ounce; or mixed in ſmaller quantity with cathartic infuſions, or the like.

TINCTURA JALAPPÆ.
Tincture of jalap.
Edinb.

Take of
Jalap root, three ounces;
Proof ſpirit, fifteen ounces.
Digeſt for eight days, and ſtrain.

Rectified ſpirit of wine was formerly ordered for the preparation of this tincture; but rectified ſpirit, diſſolving little more than the pure reſinous parts of the jalap, rendered the uſe of the medicine ſomewhat leſs commodious than that of the tincture prepared with proof ſpirit. Moſt of the tinctures made in rectified ſpirit, diluted with water ſo as to be fit for taking, form a turbid white mixture: many of them are ſafely taken in this form, without any further addition; but the cathartic ones are never to be ventured on without an admixture of ſyrup or mucilage to keep the reſin united with the liquor; for if it ſeparate, in its pure undivided ſtate, it never fails to produce violent gripes.

Some have preferred to the tincture of jalap, a ſolution in ſpirit of wine of a known quantity of the reſin extracted from the root; and obſerve, that this ſolution is more certain in ſtrength than any tincture that can be drawn from the root directly. For, as the purgative virtue of jalap reſides in its reſin, and as all jalap appears, from experiment, not to be equally reſinous, ſome ſorts yielding five, and others not three ounces of reſin from ſixteen; it follows, that although the root be always taken in the ſame proportion as the menſtruum, and the menſtruum always of the ſame ſtrength, it may nevertheleſs, according to the degree of goodneſs of the jalap, be impregnated with different quantities of reſin, and conſequently prove different in degree of efficacy. Though this objection againſt the tincture does not reach ſo far as ſome ſeem to ſuppoſe, it certainly behoves the apothecary to be careful in the choice of the root. The inferior ſorts may be employed for making the *reſina jalapii*, which they yield in as great perfection, though not in ſo large quantity, as the beſt. Neumann thinks even the worm-eaten jalap as good, for that purpoſe, as any other.

TINCTURA JALAPPÆ COMPOSITA.
Compound tincture of jalap.
Edinb.

Take of
Jalap, ſix drams;
Black hellebore roots, three drams;
Juniper berries,
Guaiacum ſhavings, each half an ounce;
French brandy, a pint and a half.
Digeſt for three days, and afterwards ſtrain the tincture.

This tincture requires to be taken in larger quantity than either of the foregoing. If intended to act fully as a cathartic, it may, in ſome caſes, be employed to advantage, in ſmall doſes, as an alterant. The quantity of the purgative materials, that goes to an ounce of the tincture, is fifteen grains of jalap, and ſeven and a half of the black hellebore root.

TINCTURA JAPONICA.

Japonic tincture.

Lond.

Take of
- Japan earth, three ounces;
- Cinnamon, two ounces;
- Proof ſpirit, two pints.

After a proper digeſtion, let the tincture be paſſed through a ſtrainer.

A tincture of this kind, with the addition of Peruvian bark, ambergris, and muſk, to the ingredients above directed, was formerly kept in the ſhops. The tincture here received is preferable for general uſe. Where any other ingredients are required, tinctures of them may be occaſionally mixed with this in extemporaneous preſcription. The cinnamon is a very uſeful addition to the Japan earth, not only as it warms the ſtomach, &c. but likewiſe as it improves the roughneſs and aſtringency of the other.

* TINCTURA E KINO.

Tincture of gum kino.

Edinb.

Take of
- Gum kino, two ounces;
- Proof ſpirit, one pound and an half.

Digeſt eight days, and ſtrain off the tincture.

These tinctures are of good ſervice in all kinds of defluxions, catarrhs, looſeneſſes, uterine fluors, and ſimilar diſorders, where mild aſtringent medicines are indicated. Two or three tea-ſpoonfuls may be taken every now and then, in red wine, or any other proper vehicle.

TINCTURA LACCÆ.

Tincture of gum-lac.

Edinb.

Take of
- Gum-lac, powdered, an ounce;
- Myrrh, powdered, half an ounce;
- Spirit of ſcurvy-graſs, a pint and a half.

Digeſt in a ſand-heat for ſix days: after which, ſtrain off the tincture.

This tincture is principally employed for ſtrengthening the gums, and in bleedings and ſcorbutic exulcerations of them: it may be fitted for uſe in theſe intentions, by mixing it with honey of roſes, or the like. Some recommend it internally againſt ſcorbutic complaints, and as a corroborant in gleets, female weakneſſes, &c. Its warmth, pungency, and manifeſtly aſtringent bitteriſh taſte, point out its virtues, in theſe caſes, to be conſiderable, though common practice, among us, has not yet received it.

TINCTURA FLORUM MARTIALIUM.

Tincture of the martial flowers.

Lond.

Take of
- Martial flowers, four ounces;
- Proof ſpirit, one pint.

Digeſt and ſtrain.

TINCTURA MARTIS.

Tincture of iron.

Edinb.

Take of
- Iron filings, purified and reduced to powder, three ounces;

Marine acid, enough to diſſolve the powder.

Digeſt with a gentle heat, and, when the powder is diſſolved, add ſuch a quantity of ſpirit of wine as will make up the whole liquor two pounds.

TINCTURA MARTIS IN SPIRITU SALIS.

Tincture of iron in ſpirit of ſalt.

Lond.

Take of
- Iron filings, half a pound;
- Glauber's ſpirit of ſalt, three pounds;
- Rectified ſpirit of wine, three pints.

Digeſt the iron filings in the ſpirit of ſalt, without heat, as long as the ſpirit acts upon the iron. After the feces have ſubſided, evaporate the liquor to one pound, and add thereto the vinous ſpirit.

All the tinctures of ſteel are no other than real ſolutions of the metal made in acids, and combined with vinous ſpirits. The three tinctures, here directed, differ from one another only in ſtrength, the acid being the ſame in all: the firſt is the weakeſt, and the laſt the ſtrongeſt. In a former pharmacopœia there was a tincture from the matter which remains after the ſublimation of the martial flowers; which, though it appears to be a good one, is now expunged as ſuperfluous. Some have recommended dulcified ſpirit of nitre as a menſtruum; but though this readily diſſolves the metal, it does not keep it ſuſpended. The marine is the only acid that can be employed for this uſe.

All theſe tinctures are greatly preferable to the calces or croci of iron, as being not only more ſpeedy, but likewiſe more certain in their operation: the latter, in ſome caſes, paſs off through the inteſtinal tube with little effect; whilſt the tinctures ſcarce ever fail. From ten to twenty drops of either of the tinctures, may be taken two or three times a day, in any proper vehicle; though it is ſeldom adviſable to extend the doſe ſo far as the laſt of the quantities, eſpecially in regard to the tincture in ſpirit of ſalt, which is exceedingly ſtrong of the iron.

TINCTURA MELAMPODII.

Tincture of melampodium, or black hellebore.

Lond. and Edinb.

Take of
- Black hellebore roots, four ounces;
- Cochineal, two ſcruples;
- Proof ſpirit, two pints.

Digeſt them together, and afterwards filter the tincture through paper.

This is perhaps the beſt preparation of hellebore, when deſigned for an alterative, the menſtruum here employed extracting the whole of its virtues. It has been found, from experience, particularly ſerviceable in uterine obſtructions: in ſanguine conſtitutions, where chalybeates are hurtful, it ſeldom fails of exciting the menſtrual evacuations, and removing the ill conſequences of their ſuppreſſion. So great is the power of this medicine, that wherever, from an ill conformation of the parts, or other cauſes, the expected diſcharge does not ſucceed upon the uſe of it, the blood, as Dr. Mead has obſerved, is ſo forcibly propelled, as to make its way through other paſſages. A tea ſpoonful of the tincture may be taken twice in a day, in warm water, or any other convenient vehicle.

The college of Edinburgh had formerly a tincture of this root with wine. Proof ſpirit is undoubtedly preferable, both as a menſtruum, and as being better calculated for keeping.

TINCTURA MYRRHÆ.

Tincture of myrrh.

Lond.

Take of
  Myrrh, three ounces ;
  Proof ſpirit, two pints.
After due digeſtion, ſtrain off the tincture.

Edinb.

Take of
  Myrrh, three ounces ;
  Rectified ſpirit of wine, two pounds and a half.
Digeſt ten days, and ſtrain off the tincture.

The pharmaceutical writers in general have been of opinion, that no good tincture can be drawn from myrrh by ſpirit of wine alone, without the aſſiſtance of fixt alkaline ſalts. But it appears from proper experiments, that theſe ſalts only heighten the colour of the tincture, without enabling the menſtruum to diſſolve any more than it would by itſelf. Rectified ſpirit extracts, without any addition, all that part of the myrrh, in which its peculiar ſmell and taſte reſide, viz. the reſin : and proof ſpirit diſſolves almoſt the whole drug, except its impurities.

Tincture of myrrh is recommended internally for warming the habit, attenuating viſcid juices, ſtrengthening the ſolids, opening obſtructions, particularly thoſe of the uterine veſſels, and reſiſting putrefaction, Boerhaave greatly eſteems it in all languid caſes, proceeding from ſimple inactivity ; in thoſe female diſorders which are occaſioned by an aqueous, mucous, ſluggiſh indiſpoſition of the humours, and a relaxation of the veſſels ; in the fluor albus, and all diſeaſes ariſing from a ſingular cauſe. The doſe is from fifteen drops to forty or more. The medicine may doubtleſs be given in theſe caſes to advantage ; though with us, it is more commonly uſed externally, for cleanſing foul ulcers, and promoting the exfoliation of carious bones.

TINCTURA MYRRHÆ ET ALOES.

Tincture of myrrh and aloes.

Edinb.

Take of
  Myrrh, in powder, one ounce and a half ;
  Hepatic aloes, in powder, one ounce ;
  Rectified ſpirit of wine, two pints.
Digeſt in a ſand-heat for ſix days, and then let the tincture be ſtrained off.

This tincture is employed only in chirurgical dreſſings, for cleanſing foul ulcers, reſtraining the progreſs of gangrenes, &c. in which intention the aloes is an uſeful addition to the myrrh. The hepatic aloes is reckoned more effectual for theſe purpoſes than the finer Socotorine.

TINCTURA OPII, vulgo LAUDANUM LIQUIDUM.

Tincture of opium, commonly called liquid laudanum.

Edinb.

Take of
  Opium, two ounces ;

Spirituous cinnamon water, one pound and an half.
Digeſt four days, and filter.

This is a very elegant liquid opiate, the menſtruum diſſolving nearly the whole ſubſtance of the opium, and effectually covering its ill flavour. The proportion of menſtruum is ſomewhat larger than in the vinous tincture formerly deſcribed: one grain of opium goes to about twenty drops of that tincture, and twenty-five of this: nevertheleſs, as there appears to be more of the opium diſſolved here than in the other, this tincture may poſſibly be the ſtronger of the two. It were to be wiſhed that the ſhops were furniſhed with a liquid opiate, in which the proportion of menſtruum was ſtill much larger, ſo as to admit of the doſe being determined by weight or meaſure; the method, by drops, ſeeming too precarious for a medicine of ſo powerful a kind. The following preparation is contrived with this view.

Take of
Thebaic extract, half a dram;
Highly-rectified ſpirit of wine, called alcohol, ten ounces;
Simple cinnamon water, twenty ounces.
Digeſt them together until the opium is diſſolved, and then filter the ſolution through paper.

This preparation I apprehend to be free from all the inconveniencies attending the common opiate tinctures. The menſtruum diſſolves the whole of the opium except the impurities, and conſequently the tincture is not liable to any uncertainty in point of ſtrength. The doſe may be aſcertained to the greateſt exactneſs: one grain of opium is contained in one ounce by meaſure, which is equal nearly to ſeven drams by weight. Neither the tinctures in wine nor proof ſpirit are ſo well adapted for keeping, as could be wiſhed; in long ſtanding, a part of the opium is gradually thrown off from both, and conſequently the tinctures become gradually weaker: the part which thus ſeparates, amounts ſometimes, as I have been informed, to near one-fourth of the quantity of opium at firſt diſſolved; it floats on the ſurface of the vinous tincture, and in the ſpirituous ſinks to the bottom. In the preparation here recommended, it has not been obſerved that any ſeparation happens.

Inſtead of the cinnamon water, pure water may be employed in the mixture; and where aromatic additions are wanted, either in a medicinal intention, or for covering the ill ſmell of the opium, any proper tincture or diſtilled water may be extemporaneouſly joined. Saffron, an addition employed by the Edinburgh college, has been looked upon as a corrector of opium; but the qualities it was ſuppoſed to correct, are merely imaginary: nor indeed can that article be of much importance in any intention, in the ſmall quantity that enters a doſe of the tincture; a grain of opium being accompanied with only half a grain of ſaffron.

TINCTURA RHABARBARI SPIRITUOSA.

Spirituous tincture of rhubarb.

Lond.

Take of
Rhubarb, two ounces;
Leſſer cardamom ſeeds, huſked, half an ounce:
Saffron, two drams;
Proof ſpirit, two pints.

Digeſt without heat, and ſtrain off the tincture for uſe.

TINCTURA RHEI AMARA.

Bitter tincture of rhubarb.

Edinb.

Take of

Rhubarb, two ounces;

Gentian root, half an ounce;

Virginian ſnakeroot, one dram;

Proof ſpirit, two pounds and an half.

Digeſt ſeven days, and ſtrain off.

TINCTURA RHEI DULCIS.

Sweet tincture of rhubarb.

Edinb.

Take of

Rhubarb, two ounces;

Leſſer cardamoms, half an ounce;

French brandy, two pints.

Digeſt for two days; and then, having ſtrained out the tincture, add to it four ounces of white ſugar-candy, in powder, and digeſt again until the ſugar is diſſolved.

The laſt of theſe preparations is ſomewhat improved from the former edition. Two ounces of liquorice and one of raiſins are ſupplied by an increaſe of the ſugar; and two drams of canella alba, by increaſing the cardamom ſeeds from two to four drams.

All the foregoing tinctures of rhubarb are deſigned as ſtomachics and corroborants, as well as purgatives. Spirituous liquors excellently extract thoſe parts of the rhubarb in which the two firſt qualities reſide, and the additional ingredients conſiderably promote their efficacy. In weakneſs of the ſtomach, indigeſtion, laxity of the inteſtines, diarrhœas, cholicky and other like complaints, theſe medicines are frequently of good ſervice. The ſecond is alſo, in many caſes, an uſeful addition to the Peruvian bark, in the cure of intermittents, particularly in cachectic habits, where the viſcera are obſtructed. In theſe intentions, a ſpoonful or two may be taken for a doſe, and occaſionally repeated.

TINCTURA SATURNINA.

Saturnine tincture.

Lond.

Take of

Sugar of lead,

Green vitriol, each two ounces;

Rectified ſpirit of wine, two pints.

Reduce the ſalts ſeparately into a powder; then add the ſpirit, and digeſt them together without heat; afterwards filter the tincture through paper.

TINCTURA ANTIPHTHISICA.

Antiphthiſical tincture.

Edinb.

Take of

Sugar of lead, an ounce and a half;

Vitriol of iron, an ounce;

Rectified ſpirit of wine, a pint.

Let a tincture be extracted without heat.

The reducing of the ſalts *ſeparately* into powder, and performing of the digeſtion *without heat,* are very neceſſary circumſtances: for if the ingredients be attempted to be pulverized together, they will grow ſoft and almoſt liquid: and if heat be made uſe of, ſcarce any tincture will be obtained.

Theſe tinctures are ſometimes given from twenty to thirty drops, for reſtraining immoderate ſecretions, particularly the colliquative ſweats attending hectic fevers and phthiſical diſorders, whence the name *antiphthiſical* tincture. They are undoubtedly medicines of great efficacy in theſe caſes, but too dangerous ones to be raſhly ventured on. Some have ſuppoſed, that they do not contain any of the ſugar of lead; but experiments, made for that purpoſe, have ſhewn that they do: and therefore, the London college has very judiciouſly changed the title of their tincture into one expreſſing its being a preparation of lead.

TINCTURA SENÆ.

Tincture of ſena.

Lond.

Take of
- Raiſins, ſtoned, ſixteen ounces;
- Sena, one pound;
- Caraway ſeeds, one ounce and a half;
- Leſſer cardamoms, huſked, half an ounce;
- Proof ſpirit, one gallon.

Digeſt without heat, and then ſtrain the tincture.

TINCTURA SENÆ COMPOSITA, vulgo ELIXIR SALUTIS.

Compound tincture of ſena, commonly called elixir of health.

Edinb.

Take of
- Sena leaves, two ounces;
- Jalap root, one ounce;
- Coriander ſeeds, half an ounce;
- Proof ſpirit, three pounds and an half.

Digeſt for ſeven days, and to the ſtrained liquor add four ounces of fine ſugar.

Both theſe tinctures are uſeful carminatives and cathartics, eſpecially to thoſe who have accuſtomed themſelves to the uſe of ſpirituous liquors; they oftentimes relieve flatulent and colicky complaints, where the common cordials have little effect: the doſe is from one to two ounces. Several preparations of this kind have been offered to the public, under the name of Daffy's elixir. The two above are equal to any, and ſuperior to moſt of them.

TINCTURA SERPENTARIÆ.

Tincture of ſnakeroot.

Lond.

Take of
- Virginian ſnakeroot, three ounces;
- Proof ſpirit, two pints.

Digeſt without heat, and ſtrain off the tincture.

The tincture of ſnakeroot was in a former pharmacopœia directed with the *tinctura ſalis tartari*, which being now expunged, it was propoſed to the college to employ rectified ſpirit; but as the heat of this ſpirit prevents the medicine from being taken in ſo large a doſe as it might otherwiſe be, a weaker ſpirit was made choice of. The tincture made in this menſtruum, which extracts the whole virtues of the root, may be taken to the quantity of a ſpoonful or more every five or ſix hours.

The college of Edinburgh directs this tincture to be drawn with plague water; a diſtilled ſpirituous water, impregnated with maſterwort, angelica, and elder flowers, and mixed with diſtilled vinegar.

Edinb.

Take of
- Virginian ſnakeroot, two ounces;
- Cochineal, one dram;
- Proof ſpirit, two pounds and an half.

Digeſt four days, and ſtrain off.

The plague water, as directed in a former pharmacopœia, is equally efficacious, as a menſtruum, with the ſimple proof ſpirit; and likewiſe coincides with the general intention of the medicine, as an alexipharmic in fevers.

TINCTURA STOMACHICA.

Stomachic tincture.

Lond.

Take of
Raiſins, ſtoned, four ounces;
Cinnamon, half an ounce;
Caraway ſeeds,
Leſſer cardamoms, huſked,
Cochineal, of each two drams,
Proof ſpirit, two pints.
Digeſt without heat, and ſtrain off the tincture.

THIS is a moderately warm ſtomachic tincture, much more pleaſant than the USQUEBAUGH of our former pharmacopœias. It may be taken, without any vehicle, to half an ounce or an ounce, though oftener uſed in mixtures.

TINCTURA STYPTICA.

Styptic tincture.

Lond.

Take of
Green vitriol, calcined, one dram;
French brandy (ſuch as has acquired a yellowiſh tinge from the caſk) two pints.
Mix them together, that the ſpirit may grow black; then paſs it through a ſtrainer.

SOME have ſuppoſed, that no other ſpirit than French brandy would ſucceed in ſtriking the black colour, for which this tincture is valued. But any ſpirit, that has gained an impregnation from the oak caſks, which theſe kinds of liquors are generally kept in, or from other vegetable aſtringents, will equally exhibit this phænomenon; and French brandy will not do it, without ſuch aſſiſtance. The title of this tincture expreſſes its medicinal intention. The celebrated STYPTIC OF HELVETIUS (which is ſaid to be the ſame with that of EATON) differs from it no otherwiſe, than in being more operoſe in compoſition. They are recommended both for internal uſe, and for reſtraining external hæmorrhages. Their virtues do not ſeem to depend ſo much on the iron, as on the menſtruum; the quantity of metal diſſolved being extremely ſmall. In keeping, the iron is apt to ſeparate, and the liquor to loſe its black colour.

TINCTURA SUCCINI.

Tincture of amber.

Take of
Yellow amber, two ounces;
Rectified ſpirit of wine, twenty ounces.
Digeſt in a ſand-heat for eight days, and afterwards filter the tincture.

THIS is a very elegant preparation of amber, of a grateful balſamic taſte, and fragrant ſmell. Boerhaave, Hoffman, and others, ſtrongly recommend it in diſorders proceeding from a lax ſtate of the ſolids and debility of the nervous ſyſtem; in ſuppreſſions of the menſtrual diſcharges, the fluor albus, ſeminal gleets, rheumatic complaints, and ſome kinds of epilepſies. It is directed to be taken from ten to an hundred drops, in Canary or other rich wine.

The medicine is doubtleſs an efficacious one; though it would be much more ſo, if a part of the ſpirit were drawn off, ſo as to leave what it had extracted from the amber, concentrated into the conſiſtence of a balſam: a tea-ſpoonful of this may be taken three or four times a day, with ſugar, or in any convenient vehicle. The ſpirit diſtilled off, which is richly impregnated with the amber ſmell, may be reſerved for extracting a freſh tincture from another parcel of amber. A tincture of amber, made in this ſpirit, poſſeſſes the whole virtue of the concrete, and appears to be one of the moſt valuable preparations of it.

Fixt alkaline ſalts have been commonly employed in the preparation of this tincture; but with no good effect; for they not only do not promote the diſſolution of the amber, but likewiſe injure the medical virtue of the preparation. Scarcely any of the ſubſtances that have been made tial of, give any conſiderable aſſiſtance to ſpirit of wine in diſſolving this concrete, except the vitriolic acid; which, when intimately combined with it into a dulcified ſpirit, forms a menſtruum ſaid to be much more efficacious for amber than the ſimple vinous ſpirit. The college of Edinburgh have accordingly made choice of this menſtruum, and directed the tincture as follows.

Take of
Yellow amber, two ounces;
Dulcified ſpirit of vitriol, one pint.
Digeſt them in a ſand-bath, with a gentle heat, for four days; and then filter the tincture.

TINCTURA SUDORIFICA.
Sudorific tincture.
Edinb.

Take of
Virginian ſnakeroot, ſix drams;
Cochineal, -
Engliſh ſaffron, each two drams;
Opium, one ſcruple:
Spirit of Mindererus, one pint.
Digeſt them together in a gentle heat for three days, and then paſs the tincture through a ſtrainer.

This compoſition is an efficacious ſudorific; the ingredients being of the moſt powerful kind; and the menſtruum not only extracting thoſe parts of them in which their virtues conſiſt, but co-operating ſtrongly in the ſame intention. Ruſſia caſtor, a ſupernumerary ingredient in former editions, is now omitted: and cochineal, which from the quantity of it formerly employed, ſeemed to have been deſigned with a medicinal view, is now reduced to one half, and nothing more is expected from it, than to furniſh an agreeable colour to the tincture. Half an ounce of the tincture, by meaſure, contains five eighths of a grain of opium.

TINCTURA SULPHURIS.
Tincture of ſulphur.

Take of
Rectified ſpirit of wine, one pint.
Hepar ſulphuris (that is, a mixture of ſulphur and fixt alkaline ſalt melted together) four ounces.
Grind the hepar into powder whilſt hot from the fire, add to it the ſpirit, and digeſt in a moderate heat for twenty-four hours; then pour off the tincture from the feces.

The digeſtion may be commodiouſly performed in a glaſs receiver. Put the ſpirit firſt into the veſſel, and pour the hot powder upon it: then ſhake them together; and, to prevent the exhalation of any part of the ſpirit during the digeſtion, inſert a glaſs tube into the mouth of the receiver.

This tincture is of a rich gold colour, a hot aromatic taſte, and a not ungrateful ſmell. Its virtues are thoſe of a warm, attenuating, aperient, and anti-acid medicine. Some have recommended it as a laſt reſource in phthiſics and ulcerations of the lungs; but in theſe caſes it promiſes little ſervice, and has been ſometimes found prejudicial. The doſe is from ten to ſixty drops: it is moſt commodiouſly taken in Canary or other rich wines.

TINCTURA ANTIMONII.
Tincture of antimony.
Lond.

Take of
- Any fixt alkaline ſalt, one pound;
- Antimony, half a pound;
- Rectified ſpirit of wine, two pints.

Reduce the antimony into powder, mix it with the ſalt, and melt them together, with a ſtrong fire, for an hour. Then pour out the matter, pulverize it, add the ſpirit, and digeſt them for three or four days: after which, ſtrain off the tincture for uſe.

Edinb.

Take of
- Antimony, in powder, four ounces;
- Salt of tartar, ſix ounces;
- Rectified ſpirit of wine, two pints.

Mix the antimony with the ſalt of tartar, and inject them by little and little into a crucible placed in a ſtrong fire. The mixture melts thin, and is to be continued in this ſtate for half an hour; after which, it is to be poured out into a hot and dry iron mortar. Powder the maſs while hot, put it into a heated matraſs, and pour thereon the ſpirit. Digeſt them together, for three days, in a gentle heat of ſand; and then decant the tincture.

In theſe proceſſes, the alkaline ſalt unites with the ſulphur of the antimony into a hepar; which communicates to the ſpirit a tincture ſimilar to the foregoing. This antimonial tincture is ſuppoſed to contain likewiſe ſome of the reguline parts of the mineral, and is ſaid to have ſometimes provoked a puke when taken on an empty ſtomach, even in a ſmall doſe. It ſtands recommended, in doſes of from ten to ſixty drops or more, as a deobſtruent, promoter of urine, and a purifier of the blood.

TINCTURA ANTIMONII DIAPHORETICI.
Tincture of diaphoretic antimony.

Take of
- Diaphoretic antimony, ſixteen ounces;
- Nitre, four pounds;
- Tartarized ſpirit of wine, three pints.

Let the antimony and nitre be finely powdered, mixed, injected by a ſpoonful at a time into a red-hot crucible, and kept in a ſtrong melting heat for half an hour. Then pour the matter into a warm iron mortar, powder it whilſt hot, and immediately add the vinous ſpirit. Digeſt for three days, and filter the tincture for uſe.

This tincture is recommended for the ſame purpoſes as the foregoing, and in the ſame doſe. It is very fragrant in ſmell, and agreeable to the taſte.

TINCTURA SALIS TARTARI.
Tincture of ſalt of tartar.

Take of
- Salt of tartar, ſix ounces.

Melt it in a crucible till it acquires a greeniſh colour; pulverize it whilſt hot, and immediately pour upon it, in a ſtrong long-necked matraſs, as much rectified ſpirit of wine as will ſtand three or four inches above it. Digeſt, for ſeveral days, in a pretty ſtrong ſand-heat, that a tincture may be obtained.

This preparation is taken from a former edition of our pharmacopœia. It has been uſually expected to be of a red hue; but (as the committee obſerve) if neither the ſalt nor the ſpirit have any oily tincture, the ſpirit, though it acquires from the alkali a hot pungent taſte, will ſcarce receive any degree of colour, unleſs by ſome ſpark of coal, which may accidentally fall into the crucible, while the ſalt is calcining. For this reaſon, this tincture has been uſually prepared in a counterfeit manner, by adding ſome portion of antimony to the ſalt, whereby it reſembled too much the tincture of antimony, for both to be retained.

TINCTURA TOLUTANA.
Tincture of balſam of Tolu.
Edinb.

Take of
Balſam of Tolu, an ounce and a half;
Rectified ſpirit of wine, a pint.
Digeſt in a ſand heat, until the balſam is diſſolved: and then ſtrain the tincture.

This ſolution of balſam of Tolu poſſeſſes all the virtues of the balſam itſelf. It may be taken internally, in the ſeveral intentions for which this valuable balſam is proper, to the quantity of a tea ſpoonful or two, in any convenient vehicle. Mixed with the plain ſyrup of ſugar, it forms an elegant balſamic ſyrup.

TINCTURA VALERIANÆ. SIMPLEX.
Simple tincture of valerian.
Lond.

Take of
Wild valerian root, four ounces:
Proof ſpirit, two pints.
After due digeſtion, ſtrain off the tincture.

The valerian root ought to be reduced into fine powder, otherwiſe the ſpirit will not ſufficiently extract its virtues. The tincture proves of a deep colour, and conſiderably ſtrong of the valerian; though it has not been found to anſwer ſo well in the cure of epileptic diſorders, as the root in ſubſtance exhibited in the form of powder or bolus. The doſe of the tincture is, from half a ſpoonful to a ſpoonful or more, two or three times a day.

TINCTURA VALERIANÆ VOLATILIS.
Volatile tincture of valerian.
Lond.

Take of
Wild valerian root, four ounces;
Volatile aromatic ſpirit, two pints.
Digeſt without heat, in a veſſel cloſely ſtopt, and afterwards ſtrain off the tincture.

The volatile ſpirit is here an excellent menſtruum, and, at the ſame time, conſiderably promotes the virtues of the valerian, which in ſome caſes wants an aſſiſtance of this kind. The doſe may be a tea-ſpoonful or two.

TINCTURA VERATRI.
Tincture of veratrum, or white hellebore.
Lond.

Take of
White hellebore root, eight ounces;
Proof ſpirit, two pints.
Digeſt them together, and filter the tincture through paper.

This tincture is ſometimes uſed for acuating cathartics, &c. and as an emetic in apoplectic and maniacal diſorders. It may likewiſe be ſo managed, as to prove a powerful alterative and deobſtruent, in caſes where milder remedies have little effect. But a great deal of caution is requiſite in its uſe. The doſe, at firſt, ought to be only a few drops; if conſiderable, it proves violently emetic or cathartic.

BALSAMUM GUAIACINUM.

Balſam of guaiacum.

Lond.

Take of
Gum guaiacum, one pound;
Balſam of Peru, three drams;
Rectified ſpirit of wine, two pints and a half.
Digeſt till the gum is diſſolved, and then ſtrain off the balſam.

ELIXIR GUAIACINUM.

Elixir of guaiacum.

Edinb.

Take of
Gum guaiacum, one pound;
Balſam of Peru, three drams;
Rectified ſpirit of wine, two pounds and an half.
Digeſt for ten days, and ſtrain off.

* ELIXIR GUAIACINUM VOLATILE.

Volatile elixir of guaiacum.

Edinb.

Take of
Gum guaiacum, four ounces;
Balſam of Peru, two drams;
Eſſential oil of ſaſſafras, half a dram;
Vinous ſpirit of ſal ammoniac, one pound and an half.
Macerate for ſix days, in a well ſtopped vial, and ſtrain off the elixir.

These compoſitions are medicines of great efficacy, and capable of anſwering many uſeful purpoſes. They warm and ſtrengthen the habit, and promote inſenſible perſpiration. Twenty or thirty drops may be taken two or three times a day, or oftener, in any proper vehicle, in rheumatic complaints, cutaneous defedations, &c. particularly where the patient is of a cold phlegmatic temperament, and the ſolids weak and relaxed. In hot, bilious conſtitutions, and tenſity or rigidity of the veſſels, like other ſtimulating medicines, they are evidently improper.

BALSAMUM COMMENDATORIS.

Baume de commandeur.

Take of
Dry Peruvian balſam, one ounce;
Storax in the tear, two ounces;
Benjamin, three ounces;
Socotorine aloes,
Myrrh,
Olibanum,
Angelica roots,
St. John's wort flowers, each half an ounce;
Spirit of wine, two pounds eight ounces by weight.
Let them ſtand together in the ſun, during the dog-days, in a glaſs veſſel, cloſely ſtopt; and afterwards ſtrain out the balſam thro' a linen cloth.

This balſam has been inſerted, with little variation, in ſome foreign pharmacopœias, and likewiſe kept a ſecret in private hands, under the titles of *Balſamum Perſicum*, *Balſam of Berne*, *Wade's Balſam*, *Friar's Balſam*, *Jeſuit's drops*, &c. The form above is taken from the original receipt publiſhed by Pomet (*Hiſtoire des drogues*, edit. 2. tom. ii. p. 56.) It ſtands greatly recommended, externally, for cleanſing and healing wounds and ulcers, diſcuſſing cold tumors, allaying gouty, rheumatic, and other old pains and aches; and likewiſe internally, for warming and ſtrengthening the ſtomach and inteſtines, expelling flatulencies, and relieving colicky complaints. Outwardly, it is applied cold on the part with a feather; inwardly, a few drops are taken at a time, in wine or any other convenient vehicle.

BALSAMUM TRAUMATICUM:

Traumatic or vulnerary balſam.

Lond.

Take of
  Benzoine, three ounces;
  Storax, ſtrained, two ounces;
  Balſam of Tolu, one ounce;
  Socotorine aloes, half an ounce;
  Rectified ſpirit of wine, two pints.
Digeſt, that the gums may as much as poſſible be diſſolved; and then ſtrain off the balſam for uſe.

This is an elegant reformation of the preceding compoſition, conſiderably more ſimple, yet not inferior in efficacy. The balſam of Tolu ſupplies, with advantage, the dry Peruvian balſam, a drug very rare to be met with in this country: the olibanum, myrrh, and angelica roots here omitted, were certainly ſuperfluous in a medicine containing ſo much more powerful materials; and the St. John's wort flowers are as deſervedly thrown out, as having little elſe to recommend them than prejudice or ſuperſtition.

Edinb.

Take of
  Benzoine, powdered, three ounces;
  Balſam of Peru, two ounces;
  Hepatic aloes, in powder, half an ounce;
  Rectified ſpirit of wine, two pints.
Digeſt them in a ſand-heat, for the ſpace of three days; and then ſtrain the balſam.

This is a further contraction of the baume de commandeur, without any injury to it as a medicine, at leaſt with regard to the purpoſes for which the title ſhews it deſigned. Socotorine aloes is here judiciouſly exchanged for the hepatic, which appears from experience to be the moſt ſerviceable in external applications.

ELIXIR ALOES.

Elixir of aloes.

Lond.

Take of
  Tincture of myrrh, two pints;
  Socotorine aloes,
  Saffron, each three ounces.
Digeſt them together, and ſtrain off the elixir.

ELIXIR PROPRIETATIS.

Edinb.

Take of
  Myrrh, in powder, two ounces;
  Rectified ſpirit of wine,
  Proof ſpirit, of each one pound.
Digeſt for four days, and add
  Socotorine aloes, powdered, one ounce and a half;
  Engliſh ſaffron, one ounce.
Digeſt for two days more, and, when it is ſettled, pour it off.

This is the *elixir proprietatis* of Paracelſus, improved with regard to the manner of preparation. The myrrh, ſaffron, and aloes, have been uſually directed to be digeſted in the ſpirit together. By this method, the menſtruum ſoon loads itſelf with the latter, ſo as ſcarce to take up any of the myrrh; whilſt a tincture, extracted firſt from the myrrh, readily diſſolves a large quantity of the others. The alkaline ſalt, commonly ordered in theſe preparations,

tions, with a view to promote the diſſolution of the myrrh, we have already obſerved to be uſeleſs; and, accordingly, it is now omitted.

This medicine is greatly recommended, and not undeſervedly, as a warm ſtimulant and aperient. It ſtrengthens the ſtomach and other viſcera, cleanſes the firſt paſſages from tenacious phlegm, and promotes the natural ſecretions in general. Its continued uſe has frequently done good ſervice in cachectic and icteric caſes, uterine obſtructions, and ſimilar diſorders; particularly in cold, pale, phlegmatic habits; where the patient is of a hot, bilious conſtitution, and florid complexion, this warm ſtimulating medicine is leſs proper, and ſometimes prejudicial. The doſe may be from twenty drops to a teaſpoonful or more, two or three times a day, according to the purpoſes which it is intended to anſwer.

ELIXIR PROPRIETATIS VITRIOLICUM.

Edinb.

Take of
- Myrrh,
- Socotorine aloes, of each an ounce and an half;
- Engliſh ſaffron, one ounce;
- Sweet ſpirit of vitriol, one pound.

Digeſt the myrrh with the ſpirit, in a well ſtopped vial, four days, then add the ſaffron and aloes.

Digeſt them again for four days more, and when the feces have ſubſided, pour off the elixir.

Here the dulcified ſpirit of vitriol is very judiciouſly ſubſtituted for the ſpirit of ſulphur, ordered in other books of pharmacy to be added to the foregoing preparation: for that ſtrong acid precipitates from the liquor great part of what it had before taken up from the other ingredients; whereas, when the acid is previouſly combined with the vinous ſpirit, and thereby dulcified, as it is called, it does not impede its diſſolving power. This elixir poſſeſſes the general virtues of the preceding, and is, in virtue of the menſtruum, preferred to it in hot conſtitutions, and weakneſſes of the ſtomach. See *Elixir vitrioli* in the following page.

ELIXIR PAREGORICUM.

Paregoric elixir.

Lond.

Take of
- Flowers of benzoine,
- Opium ſtrained, each one dram;
- Camphor, two ſcruples;
- Eſſential oil of aniſeeds, half a dram;
- Rectified ſpirit of wine, two pints.

Digeſt and ſtrain.

**Edinb.*

Take of
- Flowers of benzoine,
- Engliſh ſaffron, of each three drams;
- Opium, two drams;
- Eſſential oil of aniſeed, half a dram;
- Vinous ſpirit of ſal ammoniac, ſixteen ounces.

Digeſt for four days, in a well-cloſed bottle, and ſtrain it off.

These elixirs are taken from Le Mort, and were originally preſcribed under the title of Elixir asthmaticum, which they do not ill deſerve. They contribute to allay the tickling, which provokes frequent coughing; and at the ſame time are ſuppoſed to open the breaſt, and give greater liberty of breathing. The opium procures (as it does by itſelf) a temporary relief from the ſymptoms; whilſt the other ingredients tend to remove the cauſe, and prevent their return. It is given to children, againſt the chin-cough, &c. from five drops to twenty; to adults, from twenty to an hundred. Half an ounce by meaſure contains about a grain of opium.

ELIXIR PECTORALE.

Pectoral elixir.

Edinb.

Take of
- Balſam of Tolu, two ounces;
- Balſam of Peru, one ounce;
- Flowers of benzoine,
- Engliſh ſaffron, each half an ounce;
- Rectified ſpirit of wine, two pints.

Digeſt them in a ſand-heat for three days, and then ſtrain off the elixir.

This balſamic elixir is given to the quantity of a tea-ſpoonful, two or three times a day, as an expectorant and detergent, in coughs and ulcerations of the breaſt. The balſam of Peru is a new ingredient, introduced in a late edition; and the flowers of benzoine are ſubſtituted to benzoine in ſubſtance.

ELIXIR VITRIOLI ACIDUM.

Acid elixir of vitriol.

Lond.

Take of the
- Aromatic tincture, one pint;
- Strong ſpirit (called oil) of vitriol, four ounces.

Mix them together, and after the feces have ſubſided, filter the elixir through paper.

This preparation was originally taken from Mynſicht, and has been uſually diſtinguiſhed by his name. It is here prepared in a ſomewhat different manner from that directed by the author, and in other books of pharmacy; the oil of vitriol and ſpirit of wine being there firſt mixed together, and then digeſted upon aromatics.

Mynſicht's elixir of vitriol is directed, in a preceding pharmacopœia, as follows;

Take of
- Cinnamon,
- Ginger,
- Cloves, each three drams;
- Calamus aromaticus, one ounce;
- Galangal, an ounce and a half;
- Sage,
- Mint, each half an ounce;
- Cubebs,
- Nutmegs, each two drams;
- Aloes wood,
- Citron-peel, each one dram.

Reduce theſe ingredients into a powder, to which add of
- Sugar-candy three ounces;
- Spirit of wine, a pint and a half;
- Oil of vitriol, one pint.

Digeſt them together for twenty days, and then filter the tincture for uſe.

In a late edition of the Edinburgh pharmacopœia, the *elixir vitrioli* is thus prepared.

Take of
- Cinnamon one ounce and a half;
- Ginger, one ounce;
- Oil of vitriol, ſix ounces;
- Rectified ſpirit of wine, two pounds.

Drop the oil of vitriol by little and little into the ſpirit of wine, and digeſt them together in a ſand-bath, with a very gentle heat, for three days: then add the other ingredients; continue the digeſtion, in the ſame gentle heat, for three days longer; and afterwards filter the tincture in a glaſs funnel.

The intention in theſe proceſſes is, to obtain a tincture of aromatic vegetables, in ſpirit of wine, combined with a conſiderable proportion of vitriolic acid. When the tincture is firſt drawn with vinous ſpirits, and the acid added afterwards, as in the firſt of the above preſcriptions, the acid precipitates great part of what the ſpirit had before taken up: and, on the other hand, when the acid is mixed with the ſpirit immediately before the extraction, as in the ſecond proceſs, it prevents the diſſolution of all that it would have precipitated by the former way of treatment. By previouſly uniting the acid and the vinous ſpirit together by digeſtion, as in the laſt proceſs, the inconvenience is ſomewhat leſſened.

All theſe compoſitions are valuable medicines in weakneſs and relaxations of the ſtomach, and decays of conſtitution, particularly in thoſe which proceed from irregularities, which are accompanied with ſlow febrile ſymptoms, or which follow the ſuppreſſion of intermittents. They have frequently taken place after bitters and aromatics, by themſelves, had availed nothing; and, indeed, great part of their virtue depends on the vitriolic acid; which, barely diluted with water, has, in theſe caſes, where the ſtomach could bear the acidity, produced happy effects.

Fuller relates (in his Medicina gymnaſtica) that he was recovered, by Mynſicht's elixir, from an extreme decay of conſtitution, and continual reachings to vomit. They may all be given from ten to thirty or forty drops, or more, according to the quantity of acid, twice or thrice a day, at ſuch times as the ſtomach is moſt empty.

ELIXIR VITRIOLI DULCE.

Sweet elixir of vitriol.

Lond.

Take of the
- Aromatic tincture, one pint;
- Dulcified ſpirit of vitriol, eight ounces by weight.

Mix them together.

THIS is deſigned for perſons whoſe ſtomach is too weak to bear the foregoing acid elixir. To the taſte, it is gratefully aromatic, without any perceptible acidity. The dulcified ſpirit of vitriol, here directed, occaſions little or no precipitation upon adding it to the tincture.

THE college of Edinburgh, in a former edition of their pharmacopœia, employed dulcified ſpirit of vitriol as the menſtruum. The compoſition was as follows;

Take of
- Dulcified ſpirit of vitriol, two pounds;
- Eſſential oil of mint, half an ounce;
  - of lemon peel,
  - of nutmegs, each two drams.

Gradually drop the oils into the ſpirit, and mix the whole well together.

THIS elixir, if the eſſential oils be good, and the dulcified ſpirit made as it ought to be, (if it be not, it will not diſſolve the oils), proves a very elegant and grateful ſtomachic, ſimilar to the foregoing ſweet elixir: a tea-ſpoonful of either may be taken two or three times a day.

A medicine of this kind was formerly in great eſteem under the title of VIGANI'S VOLATILE ELIXIR OF VITRIOL; the compoſition of which was firſt communicated to the public in the *Pharmacopœia reformata*. It is prepared by digeſting ſome volatile ſpirit of vitriol upon a ſmall quantity of mint-leaves

leaves curiouſly dried, till the liquor has acquired a fine green colour. If the ſpirit, as it frequently does, partakes too much of the acid, this colour will not ſucceed: in ſuch caſe it ſhould be rectified from a little fixt alkaline ſalt, as hereafter directed in chap. viii. ſect. 5. The mint is moſt commodiouſly ſuſpended in the ſpirit in a fine linen cloth: this prevents the neceſſity of filtration, during which the more volatile parts would exhale.

ELIXIR MYRRHÆ COMPOSITUM.

Compound elixir of myrrh.

Lond.

Take of

Extract of ſavin, one ounce;

Tincture of caſtor, one pint;

Tincture of myrrh, half a pint.

Digeſt them together, and then ſtrain the elixir.

This preparation is improved from one deſcribed in ſome former diſpenſatories under the name of Elixir uterinum. It is a medicine of great importance in uterine obſtructions, and in hypochondriacal caſes; though, poſſibly, means might be contrived of ſuperadding more effectually the virtues of ſavin to a tincture of myrrh and caſtor. It may be given from five drops to twenty or thirty, or more, in pennyroyal water, or any other ſuitable vehicle.

ELIXIR SACRUM.

Edinb.

Take of

Rhubarb, ten drams;

Socotorine aloes, ſix drams;

Leſſer cardamom ſeeds, half an ounce;

Proof ſpirit, two pounds and an half.

Digeſt for ſeven days, and ſtrain off the elixir.

SPIRITUS VINOSUS CAMPHORATUS.

Camphorated ſpirit of wine.

Lond. and *Edinb.*

Take of

Camphor, two ounces;

Rectified ſpirit of wine, two pints.

Mix them together, that the camphor may be diſſolved.

This ſolution of camphor is employed chiefly for external uſes, againſt rheumatic pains, paralytic numbneſſes, inflammations, for diſcuſſing tumors, preventing gangrenes, or reſtraining their progreſs. It is too pungent to be exhibited internally, even when diluted, nor does the dilution ſucceed well; for on the admixture of aqueous liquors, the camphor gradually ſeparates and runs together in little maſſes.

Hoffman, Rothen, and others, mention a camphorated ſpirit not ſubject to this inconvenience. It is prepared by grinding the camphor with ſomewhat more than an equal weight of fixt alkaline ſalt, then adding a proper quantity of proof ſpirit, and drawing off one half of it by diſtillation. This ſpirit was propoſed to the college to be received into the pharmacopœia, under the title of Spiritus camphoræ tartarizatus. But upon trial, it did not anſwer expectation; ſome of the camphor, as the committee obſerve, riſes with the ſpirit in diſtillation, though but a ſmall quantity; whence, mixed with a large portion of water, it does not ſenſibly render it turbid: but in a proper quantity, it exhibits the ſame appearance as the more common camphorated ſpirit. It did not appear, that ſpirit diſtilled from camphor, with or without the alkaline ſalt, differed at all in this reſpect.

The moſt convenient method of uniting camphor with aqueous liquors, for internal uſe, ſeems to be by the mediation of almonds, or of mucilages. Triturated with theſe, it readily mingles with water into the form of an emulſion, at the ſame time that its pungency is conſiderably abated. It may alſo be commodiouſly exhibited in the form of an oily draught, expreſſed oils totally diſſolving it.

TINCTURA BENZOINI,
Tincture of benzoine.

Take of
- Benzoine, four ounces;
- Rectified ſpirit of wine, one pint.

Digeſt them together in a ſand-heat for three or four days, and then decant off the tincture.

THIS tincture ſtands recommended in aſthmas, and other diſorders of the lungs, in doſes of from twenty to ſixty or ſeventy drops. It has, however, been principally made uſe of externally, as a coſmetic, for clearing and ſmoothing the ſkin. For theſe purpoſes it is mixed with a large portion of water, when it forms a white liquor called LAC VIRGINIS. If this be ſuffered to reſt for ſome time, the benzoine precipitates, in form of a white magiſtery (of a very pleaſant ſmell, and not diſagreeable taſte), which in the Brandenburgh pharmacopœia is preferred to the flowers of benzoine, as being free from the empyreumatic flavour with which theſe are generally attended. It is, however, of a different nature from the flowers, being no other than the benzoine in its whole ſubſtance; whereas the flowers are a diſtinct part of it, not reſinous, like the reſt of the maſs, but rather, as we ſhall ſee hereafter, of the ſaline kind. The precipitation is directed to be made with roſe water.

GUTTÆ VITÆ.
Drops of life.

Take of
- Opium, four ounces;
- Saffron, one ounce;
- Virginian ſnakeroot,
- Cochineal, each half an ounce;
- Nutmegs,
- Zedoary, each two ounces;
- Camphor, one ounce;
- Tincture of diaphoretic antimony, one pint;
- Water, two pints.

Digeſt the opium with the water in a ſcalding heat, till as much as poſſible of it is diſſolved, and paſs the ſolution through a ſtrainer. Digeſt the other ingredients in the antimonial tincture for three or four days. Mix both liquors together; let them ſtand in digeſtion for two days longer, and after the feces have ſubſided, pour off the clear for uſe.

THIS medicine has been recommended as preferable to the common opiates, and leſs apt to leave a nauſea on the ſtomach. The doſe is from ten drops to forty or fifty.

TINCTURA ſeu ESSENTIA AMBRÆ.
Tincture or eſſence of ambergris.
Pariſ.

Take of
- Ambergris, one dram;
- Tartarized ſpirit of wine,
- Spirit of roſes, that is, highly rectified ſpirit of wine drawn off from dried damaſk roſes, each one ounce and a half.

Digeſt in the heat of a water-bath.

THE ambergris, if pure, is here totally diſſolved into a reddiſh liquor, provided the heat be ſufficient to make the ſpirit boil or ſimmer. With a weaker heat, or if the ſpirit be not highly rectified, the ſolution does not ſucceed. This tincture is a high cordial: eight or ten drops may be taken on ſugar.

TINCTURA ſeu ESSENTIA REGIA.

The royal tincture or eſſence.

Pariſ.

Take of
Ambergris, two ſcruples;
Muſk, one ſcruple;
Civet, ten grains;
Oil of cinnamon, ſix drops;
Oil of rhodium, four drops;
Salt of tartar, half a dram;
Rectified ſpirit of wine,
Spirit of roſes,
Spirit of orange flowers, each one ounce and a half.

Grind the ſalt of tartar with the ambergris, muſk, civet, and eſſential oils, till they are thoroughly mixed; then add the ſpirits, and digeſt in a warm place for ſome days, frequently ſhaking the veſſel; afterwards let the liquor ſettle, and pour off the clear from the dregs.

THIS tincture is a very high perfume; and by thoſe who can bear ſubſtances of that claſs, may be taken like the preceding, as a cordial. A few drops gives a fine flavour to a large quantity of other liquors. The ambergris diſſolves here with leſs heat than in the foregoing preparation: the eſſential oils promoting its ſolution.

TINCTURA ODONTALGIA MYNSICHTI.

Mynſicht's tincture for the toothach.

Argentoratenſ.

Take of
Guaiacum wood, two ounces;
Saſſafras,
Sarſaparilla, each one ounce;
Pellitory of Spain,
Alum,
Sal prunellæ, each half an ounce;
Staveſacre ſeeds,
Henbane ſeeds, each two drams;
Opium,
Cloves, each one dram and a half;
Serpyllum,
Origanum,
Saffron, each one dram;
Rectified ſpirit of wine,
Vinegar, each one pint and a half.

Reduce the dry ingredients into powder, and extract a tincture from them with the ſpirit and vinegar mixed.

"A LITTLE of this tincture is "to be taken warm into the "mouth, and repeated if there "ſhould be occaſion. It effectu"ally relieves the moſt violent "toothachs; preventing the afflux "of humours, and ſurpriſingly ex"tracting thoſe already ſettled up"on the parts; the pain ſeems "often, on the firſt application of "it, to increaſe, but ſoon after "abates and goes off." The above compoſition, and this account of its virtues, is from the pharmacopœia of the college of Straſburgh.

ESSENTIA ALEXIPHARMACA STAHLII.

Stahl's alexipharmic eſſence.

Argentoratenſ.

Take of the roots of
Maſterwort,
Carline thiſtle,
Angelica,
Pimpinella alba, each half an ounce;
Swallow wort,
Elecampane,
White dittany,
Contrayerva,
Wild valerian, each one ounce.

Extract an eſſence or tincture from theſe ingredients, with a ſufficient quantity of highly rectified ſpirit of wine.

This tincture, kept a ſecret by its celebrated author, and firſt publiſhed by Juncker, is greatly eſteemed by many of the German phyſicians, as a diaphoretic and alexipharmic, for attenuating viſcid humours, and gently promoting urine; both in low fevers, particularly in exanthematous ones, where the eruptions have been repelled, and in chronical diſorders. The doſe is twenty or thirty drops or more. It is doubtleſs a medicine of efficacy, though ſome of its ingredients might be retrenched without injury to its virtue.

Essentia lignorum.

Eſſence of the woods.

Argentoratenſ.

Take of
Saſſafras, two ounces;
Guaiacum, three ounces;
China root,
Sarſaparilla,
Red ſaunders,
Yellow ſaunders, each one ounce;
Spirit of wine, as much as will cover the above ingredients to the height of four inches.
Digeſt for eight days, and then filter the eſſence.

This eſſence, or tincture, is given in venereal and catarrhous diſorders, and impurities of the humours in general, from a ſcruple to a dram or more. By gently drawing off half of the ſpirit, the remainder becomes proportionably ſtronger, and is then called *eſſentia lignorum concentrata.*

Balsamum vitæ.

Balſam of life.

Brandenburgh.

Take of
Eſſential oils of Lavender,
Nutmegs,
Cloves,
Rhodium,
Serpyllum, each half a dram;
Cinnamon,
Lemon peel,
Bergamotte, each two ſcruples;
Balſam of Peru, one dram;
Highly rectified ſpirit of lavender, fifteen ounces.
Firſt diſſolve the balſam in the ſpirit, then add the oils, and digeſt till the whole is diſſolved.

This fragrant balſam is an improvement on one deſcribed by Hoffman, in his notes on Poterius, and is probably the ſame, or nearly the ſame, with the balſam ſo much celebrated afterwards in that author's practice, internally in languors, faintings, debilities of the nervous ſyſtem, colics, &c. from ten to twenty or thirty drops; and externally applied to the noſtrils, temples, &c. in vertiginous, lethargic, and other like complaints. Thus much is certain, from Hoffman's own writings, that his balſam was compoſed of fragrant oils diſſolved in rectified ſpirit of wine.

SECT. VII.

Oils by infuſion and decoction.

EXPRESSED oils extract the reſinous and oily parts of vegetables, but do not act upon, or unite with the gummy and mucilaginous. Hence the *oleum e mucilaginibus* of the ſhops contains nothing of the mucilage with which its ingredients abound. Theſe oils may be tinged, by vegetable matters, of almoſt all colours; the leaves of moſt plants communicate a green; yellow flowers, a dilute gold colour; ſome red flowers, a light red; alkanet root, a beautiful and deep red.

In making the officinal oils from the leaves of plants, a good deal of care is neceſſary, to give them the fine green colour expected in them. If the boiling of the herb in the oil be not continued till all the aqueous moiſture has exhaled (the mark of which is, the herb's being criſp) the oil will have a dingy yellowiſh hue; if continued longer, it turns black, and contracts an empyreumatic ſmell. The moſt convenient method of managing the proceſs ſeems to be, to ſtrain off the oil when ſufficiently impregnated with the virtue of the plant, and afterwards to let it ſtand in a clean veſſel, over a gentle fire, until, by frequent trials on a white tile, it appears to have gained the deep green colour required.

OLEUM CHAMÆMELI.
Oil of chamomile.
Edinb.

Take of
Chamomile, with the flowers, freſh gathered and bruiſed, one pound;
Oil olive, three pints.
Boil them gently till the herb is almoſt criſp; then ſtrain and preſs out the oil.
The oils of other herbs are prepared in the ſame manner.

OLEUM HYPERICI.
Oil of St. John's wort.
Lond.

Take of
The flowers of St. John's wort, full blown, freſh gathered, and carefully freed from the cups, four ounces;
Oil olive, two pints.
Pour the oil upon the flowers, and let them ſtand together, till the oil is ſufficiently coloured.

OLEUM E MUCILAGINIBUS.
Oil of mucilages.
Lond.

Take of
Marſhmallow root, freſh, half a pound;
Linſeed,
Fenugreek ſeed, each three ounces;
Water, two pints;
Oil olive, four pints.
Bruiſe the roots and ſeeds, and gently boil them in the water for half an hour: then add the oil, and continue the boiling till all the water is waſted: afterwards let the oil be carefully poured off for uſe.

OLEUM SAMBUCINUM.
Oil of elder.
Lond.

Take of
Elder flowers, one pound;
Oil olive, two pints.

Boil the flowers in the oil, till they are almoſt criſp; then preſs out the oil, and ſet it by till the feces have ſubſided.

OLEUM VIRIDE.

Green oil.

Lond.

Take of
Bay leaves,
Rue leaves,
Marjoram leaves,
Sea wormwood leaves,
Chamomile leaves, each, freſh gathered, three ounces;
Oil olive, two pints.

Bruiſe the herbs and gently boil them in the oil till they are almoſt criſp; then preſs out the oil, let it ſtand to ſettle, and afterwards pour it off from the ſediment.

All the foregoing oils are deſigned for external applications only. They are ſuppoſed, beſides the general emollient quality of the oil itſelf, to receive particular virtues from the ingredients: that of chamomile flowers, to be a warm diſcutient and reſolvent; that of St. John's wort flowers, to be peculiarly grateful to the nerves, to give great relief in all kinds of pains and wearineſs, to reſolve tumours, and heal wounds and ulcers; and the oil of mucilages to be ſofter and more emollient than common oil. An oil prepared in the ſame manner from wormwood, rubbed on the ſtomach and umbilical region, is ſaid to excite appetite, ſtrengthen the viſcera, and kill worms; and one from rue, to be of ſingular efficacy againſt worms and colicky pains and ſwellings.

It is preſumed, however, that, at preſent, there are few who expect much more from theſe preparations than from common oil itſelf, which has the advantage of being leſs offenſive. The mucilaginous ingredients, marſhmallow root and linſeed, in the *oleum e mucilaginibus*, make no addition to the virtue of the oil; for mucilages, as already obſerved, are not ſoluble in oils. Experience has not diſcovered any ſuch ſingular qualities in flowers of St. John's wort, that four ounces of them ſhould communicate any remarkable virtue to a quart of oil. Of the other herbs, the more valuable parts are diſſipated by the boiling heat; and, although the remaining matter, if it were taken internally, either by itſelf, or diſſolved in watery or ſpirituous liquors, might not be deſtitute of activity; yet it can ſcarcely be ſuppoſed, when combined with a large quantity of oil, to have any material effect in external applications. The number of theſe oils has, therefore, been judiciouſly retrenched, at a late reformation. The five above retained, are not one-tenth part of thoſe which were formerly ordered to be kept in the ſhops. The moſt certain way of anſwering the purpoſes intended by theſe preparations, appears to be, by mixing with the expreſſed oil a ſuitable quantity either of the native reſins of vegetables, or of the eſſential oils and reſinous extracts artificially prepared from them.

OLEUM CAMPHORATUM.

Camphorated oil.

Edinb.

Take of
Freſh drawn oil of almonds, or linſeed, two ounces;
Camphor, half an ounce.

Diſſolve the camphor in the oil.

This oil is deſigned, like the foregoing ones, for external purpoſes. It has been in uſe for ſome time, in the infirmary of Edinburgh, againſt burns, rheumatic pains, &c.

and is thence received into the pharmacopœia of the Edinburgh college.

OLEUM ODORIFERUM.
Odoriferous oil.

Let ſome fine carded cotton be dipt in oil olive, or oil of ben nuts, that it may be thoroughly imbibed with the oil, without retaining ſo much as to drip ſpontaneouſly. Lay a bed of this cotton in the bottom of a tin or procelane veſſel, and lightly ſpread upon it a pretty thick layer of any odoriferous flowers freſh gathered, as jaſmine flowers, violets, lilies of the valley, &c. Above theſe ſpread more of the cotton, and then more flowers alternately, till the veſſel is full: then cover it cloſe, and let it ſtand for twenty-four hours in a gentle warmth. Great part of the fragrance of the flowers will be communicated to the oil in the cotton, which is to be ſtratified in the ſame manner with two or three freſh quantities of the flowers, till it is ſufficiently impregnated therewith; after which the oil is to be ſqueezed out from the cotton in a preſs.

THIS appears to be the moſt effectual method of transferring into expreſſed oils, the odoriferous matter of thoſe tender flowers which yield little or no eſſential oil; the perfumed oils and eſſences of thoſe flowers, brought from Italy, are prepared in this manner. The odorous parts may be again ſeparated from the oil, and transferred into water or ſpirit, by diſtillation with thoſe liquors.

CHAPTER IV.

Conſervation of recent vegetables and their infuſions, &c. by ſugar and honey.

SECT. I.

Conſerves.

CONSERVES are compoſitions of recent vegetable matters and ſugar, beaten together in an uniform maſs.

This management is introduced for preſerving certain ſimples, undried, in an agreeable form, with as little alteration as poſſible in their native virtues; and to ſome ſubjects it is very advantageouſly applied. Vegetables, whoſe virtues are loſt or deſtroyed in drying, may in this form be kept uninjured for a length of time: for, by carefully ſecuring the mouth of the containing veſſel, the alteration, as well as diſſipation, of their active principles, is generally prevented; and the ſugar preſerves them from the corruption which juicy vegetables would otherwiſe undergo.

There are, however, ſundry vegetables, whoſe virtues are impaired by this treatment. Mucilaginous ſubſtances, by long lying with ſugar, becomes leſs glutinous; and aſtringents, ſenſibly ſofter upon the palate. Many of the fragrant flowers are of ſo tender and delicate a texture, as almoſt entirely to loſe their peculiar qualities on being beaten or bruiſed.

In general, it is obvious, that in this form, on account of the large admixture of ſugar, only ſubſtances of conſiderable activity can be taken to advantage as medicines. And indeed, conſerves are at preſent conſidered chiefly as auxiliaries to medicines of greater efficacy; or as intermedia for joining them together. They are very convenient for reducing into boluſes or pills, the more ponderous powders, as mercurius dulcis, the calces of iron, and other mineral preparations; which with liquid or leſs conſiſtent matters, as ſyrups, will not cohere.

The ſhops were formerly incumbered with many conſerves, altogether inſignificant; the few now retained have in general either an agreeable flavour to recommend them, or are capable of anſwering ſome uſeful purpoſes as medicines. Their common doſe is the bulk of a nutmeg, or as much as can be taken up at once or twice upon the point of a knife. There is in general no great danger of exceeding in this particular.

General method of preparing conſerves.

Leaves are picked from the ſtalks, and flowers from their cups. They are then beaten in a marble mortar, with a wooden peſtle, into a ſmooth maſs; after which, thrice their weight of double-refined ſugar is added by degrees,

grees, and the beating continued till they are uniformly mixed.

The ſugar ſhould be pulverized by itſelf, and paſſed through a ſieve, before it is mixed with the vegetable maſs; otherwiſe it cannot eaſily be reduced to ſufficient fineneſs ſo as to be duly incorporated. Some vegetables are ſcarce reducible to the requiſite fineneſs by beating in a mortar: ſuch is orange-peel. This is moſt conveniently raſped or grated off from the fruit, then well mixed with the ſugar, and the compound ſet by in a cloſe veſſel for ſome weeks: after which, it may be beaten ſmooth with conſiderable leſs labour than at firſt. This peel, and red roſe buds, are commonly ground in a wooden mill made for that purpoſe.

CONSERVA foliorum COCHLEARIÆ hortenſis.

Conſerve of the leaves of garden ſcurvy-graſs.

L. E.

This is the only form in which ſcurvy-graſs in ſubſtance can be kept, without the total loſs of its virtues. The conſerve retains the full taſte and virtue of the herb for a very conſiderable length of time; as a year or two; provided the veſſel be made perfectly cloſe, and ſet in a cool place. It may be given in ſcorbutic habits, three or four times a day, or oftener: though it is more frequently uſed as an aſſiſtant to other medicines of ſimilar intention, than depended on by itſelf. It is an excellent addition to arum-root in rheumatic caſes; and in this form, even the freſh root of arum may be taken freely, without any complaint of the exceſſive pungency which of itſelf it impreſſes on the tongue. An ounce of freſh arum root, beaten into a pulp, and four ounces or leſs of conſerve of ſcurvy-graſs, well mixed together, form a compound, in which the pungency of the arum is hardly perceived, and which I have given, with good effect, to the quantity of a nutmeg twice or thrice a day. To further ſheath the acrimony of the arum, it may be beaten with equal its weight of powdered gum arabic, before the admixture of the conſerves.

CONSERVA foliorum LUJULÆ.

Conſerve of the leaves of wood-ſorrel.

L. E.

This is a very elegant and grateful conſerve; in taſte it is lightly acidulous, with a peculiar flavour, which ſome reſemble to that of green tea. It is taken occaſionally, for quenching thirſt; and cooling the mouth and fauces in hot diſtempers. It may be uſefully joined to the foregoing preparation, whoſe virtue it ſomewhat promotes, at the ſame time that it improves the taſte.

CONSERVA foliorum MENTHÆ vulgaris.

Conſerve of the leaves of ſpear-mint.

Lond.

The conſerve of mint retains the taſte and virtues of the herb. It is given in weakneſs of the ſtomach and reachings to vomit; and not unfrequently does ſervice in ſome caſes of this kind, where the warmer and more active preparations of mint would be leſs proper.

CONSERVA foliorum RUTÆ.

Conſerve of the leaves of rue.

Lond.

This conſerve is given from a dram to half an ounce, in crudities of the primæ viæ, for promoting digeſtion, and in hyſteric diſorders. It gently ſtimulates the ſolids, attenuates viſcid juices, and excites the natural ſecretions. Some have had a great opinion of it, taken in a morning, as a preſervative againſt the effects of contagious air or exhalation.

CONSERVA ſummitatum ABSINTHII maritimi.

Conſerve of the tops of ſea wormwood.

Lond.

The conſerve of wormwood has been celebrated in dropſies. Matthiolus relates, that ſeveral perſons were cured by it of that diſtemper, without the aſſiſtance of any other medicine. Where the diſorder indeed proceeds from a ſimple laxity or flaccidity of the ſolids, the continued uſe of this medicine may be of ſome ſervice; as it appears to be a not inelegant mild corroborant. It is directed to be given in the doſe of half an ounce, about three hours before meals.

CONSERVA florum LAVENDULÆ.

Conſerve of lavender flowers.

Lond.

This conſerve is not near ſo fragrant as the flowers themſelves. It is nevertheleſs a ſufficiently agreeable one; and is ſometimes uſed as a mild cordial, and in debilities of the nervous ſyſtem.

CONSERVA florum MALVÆ.

Conſerve of the flowers of mallows.

Lond.

This is looked upon as an emollient, and ſometimes made uſe of as ſuch in diſorders of the breaſt and urinary paſſages. It is the moſt unimportant of the conſerves: nor do the flowers themſelves appear to have much virtue.

CONSERVA florum ROSARUM rubrarum immaturarum.

Conſerve of the buds of red roſes.

L. E.

This is a very agreeable and uſeful conſerve. A dram or two, diſſolved in warm milk, are frequently given as a light reſtringent, in weakneſs of the ſtomach, and likewiſe in coughs and phthiſical complaints. In the German ephemerides, examples are related of very dangerous phthiſes cured by the continued uſe of this medicine. In one of theſe caſes, twenty pounds of the conſerve were taken in the ſpace of a month; and in another, upwards of thirty. Riverius mentions ſeveral other inſtances of this kind.

CONSERVA florum RORISMARINI.

Conſerve of roſemary flowers.

L. E.

Rosemary flowers in great meaſure loſe their peculiar fragrance by beating, and hence the conſerve has very little of their flavour. Some are therefore accuſtomed to make this preparation from the leaves of the plant (which retain their virtues under the peſtle) or at leaſt to add a portion of theſe to the flowers. The conſerve of roſemary is directed in weakneſs of the nerves, and as a light cordial.

CONSERVA flavedinis CORTICUM AURANTIORUM Hiſpalenſium.

Conſerve of the yellow rind of Seville orange peel.

L. E.

This conſerve is a very elegant one, containing all the virtues of the peel, in a form ſufficiently agreeable, both with regard to the doſe and the convenience of taking. It is a pleaſant warm ſtomachic, and in this intention is frequently uſed.

CONSERVA FRUCTUS CYNOSBATI.

Conſerve of hips.

L. E.

Hips require leſs ſugar for reducing them into a conſerve, than the ſubſtances above enumerated. Twelve ounces of the pulp of the ripe fruit are to be mixed with only twenty ounces of ſugar.

The conſerve of hips is of ſome eſteem, as a ſoft, cooling reſtringent. Three or four drams or more are given at a time, in bilious fluxes, ſharpneſs of urine, and hot indiſpoſitions of the ſtomach. A good deal of care is requiſite on the part of the apothecary in making this conſerve: the pulp is apt to carry with it ſome of the prickly fibres, with which the inſide of the fruit is lined. If theſe be retained in the conſerve, they will irritate the ſtomach, ſo as to occaſion vomiting.

CONSERVA PRUNORUM SILVESTRIUM.

Conſerve of ſloes.

Lond.

Let the ſloes be put into water, and ſet over the fire till they grow ſoft, with care that they do not burſt. Then take the ſloes out of the water, preſs out their pulp, and mix with it thrice its weight of double-refined ſugar.

This preparation is a gentle aſtringent, and may be given as ſuch in the doſe of two or three drams. The degree of its aſtringency will vary according to the maturity of the ſloes, and the length of time that the conſerve has been kept.

SECT. II.

Preſerves.

Preserves are made by ſteeping or boiling recent ſimples, firſt in water, and then in ſyrup, or ſolution of ſugar. The ſubject is afterwards either kept moiſt in the ſyrup, or taken out and dried, that the ſugar may candy upon it; the latter is the more uſual method.

In this proceſs, ſome of the valuable parts of the ſubject are extracted by the liquor, and conſequently loſt to the preparation; greater regard being here had to palatableneſs than medicinal efficacy. And indeed moſt of the preparations of this kind are conſidered rather as ſweetmeats than as medicines; as the buſineſs of the confectioner rather than of the apothecary. It would be needleſs therefore to mention the doſes of the ſeveral articles, or give particular remarks on the manner of preparing them.

RADIX ERYNGII CONDITA.

Candied eringo roots.

Lond.

Boil them in water, till the rind will eaſily peel off; when peeled, ſlit them through the middle, take out the pith, and waſh them three or four times in cold water. For every pound of the roots, ſo prepared, take two pounds of double-refined ſugar, which is to be diſſolved in a proper quantity of water, and ſet over the fire: as ſoon as the liquor begins to boil, put in the roots, and continue the boiling till they are ſoft.

After this manner are candied

ANGELICÆ CAULES.

Angelica ſtalks.

CORTEX AURANTIORUM CONDITUS.

Candied orange peel.

Lond.

Steep the freſh peels of Seville oranges in water, which is to be frequently renewed, until they loſe their bitterneſs. Then, having diſſolved in water a ſuitable quantity of double refined ſugar, boil the peels in this liquor till they become ſoft and tranſparent.

After the ſame manner are candied

LIMONUM CORTICES.

Lemon peels. [*L.*]

In the ſame, or a ſimilar manner, may likewiſe be candied

RADICES ANGELICÆ.

Angelica roots. [*E.*]

RADICES HELENII.

Elecampane roots. [*E.*]

All ſorts of fruits, flowers, and ſeeds may alſo be preſerved, either by keeping them in ſyrup, or cruſting them over with ſugar; but theſe kinds of preparations ſcarce belong to the art of pharmacy.

Nutmegs and ginger are brought to us ready candied from the Eaſt Indies. [*E.*]

MARS SACCHARATUS.

Candied ſteel.

Edinb.

Put any quantity of clean filings of iron into a braſs kettle, ſuſpended over a very gentle fire. Add to them, by little and little, twice their weight of white ſugar, boiled to the conſiſtence of candy, with which powdered ſtarch has been previouſly mixed, in the proportion of a dram to every pound; agitating the kettle continually, that the filings may be cruſted over with the ſugar, and taking great care to prevent their running into lumps.

This is a very agreeable preparation of ſteel; but has hitherto been made only by the confectioners. The college of Edinburgh received it in former editions; but, as there deſcribed, it was almoſt impoſſible to hinder the matter from concreting into lumps. They have now diſcovered the intermedium which prevents that inconvenience, and which the confectioners have kept a ſecret; the addition of a little ſtarch to the ſugar. The preparation may be given to the quantity of half a dram, in caſes in which chalybeate medicines are proper. See page 148.

SECT. III.

Jellies.

VEGETABLE jellies are compoſed of the juices of fruits and ſugar, boiled to a thick conſiſtence. Independently of the admixture of ſugar, the boiling appears to occaſion ſome alteration in the quality of the juices themſelves. The recent juices of the ſummer fruits are prone to fermentation. After they have been boiled, they are leſs diſpoſed to ferment, and at the ſame time they are much leſs liable to produce, in the human body, flatulencies, gripes, or fluxes; though they ſtill retain, in no ſmall degree, their original antiſeptic, anti-inflammatory, and aperient or reſtringent virtues.

GELATINA, ſeu miva, CYDONIORUM.

Jelly, or marmalade, of quinces.
Edinb.

Take three pints of depurated quince juice, and a pound of white ſugar. Simmer them together, to a proper thickneſs.

THIS is an uſeful, cooling, reſtringent medicine. It is given in weakneſs of the ſtomach, reachings to vomit, diarrhœas and dyſenteries, proceeding from a hot indiſpoſition, or ſharp bilious humours. It is beſt taken in little quantities, as a tea ſpoonful or two now and then, either by itſelf, or diluted with any ſuitable liquors.

GELATINA BERBERORUM.

Jelly of barberries.
Edinb.

Take a pound of barberries picked clean from the ſtalks, and the ſame quantity of white ſugar. Boil them with a gentle heat to a due conſiſtence; then paſs the jelly through a flannel cloth.

GELATINA RIBESIORUM.

Jelly of currants.
Edinb.

Is prepared after the ſame manner.

HERE the trouble of expreſſion is ſaved; theſe ſoft fruits freely giving out their juice, which incorporates with the ſugar, in the proceſs. Both theſe preparations are gratefully ſub-acid and cooling, and in this intention are occaſionally made uſe of, for moiſtening the mouth and fauces in febrile or inflammatory diſtempers. Diſſolved in water, they afford an uſeful diluent drink, of a ſaponaceous nature, which mingles with the blood or its ſerum when thickened (as in ſome kinds of fevers) where pure water runs off by the kidneys almoſt unchanged. By the ſame qualities, they prove ſerviceable likewiſe in chronical diſorders proceeding from obſtructions of the viſcera, or accompanied with immoderate heat: in bilious fluxes and putrid ſcurvies, their liberal and continued uſe has ſometimes had good effects. Boerhaave greatly commends theſe kinds of preparations in the ſcorbutic diſorders to which ſeafaring people are particularly ſubject.

SECT. IV.

Syrups.

SYRUPS are ſaturated ſolutions of ſugar, made in water, or watery or vinous infuſions, or in juices. They were formerly conſidered as medicines of much greater importance than they are thought to be at preſent. Syrups and diſtilled waters were for ſome ages made uſe of as the great alteratives; inſomuch that the evacuation of any peccant humour was never attempted, till by a due courſe of theſe, it had firſt been regularly prepared for expulſion. Hence aroſe the exuberant collection of both, which we meet with in pharmacopœias; and like errors have prevailed in each. As multitudes of diſtilled waters have been compounded from materials unfit to give any virtue over the helm; ſo numbers of ſyrups have been prepared from ingredients, which in this form cannot be taken in ſufficient doſes to exert their virtues; for two-thirds of a ſyrup conſiſt of ſugar, and the greateſt part of the remaining third is an aqueous fluid.

Syrups are at preſent chiefly regarded as convenient vehicles for medicines of greater efficacy; and made uſe of for ſweetening draughts and juleps, for reducing the lighter powders into boluſes, pills, or electaries, and ſimilar purpoſes. Some likewiſe may not improperly be conſidered as medicines themſelves; as ſyrup of ſaffron, and buckthorn berries.

General Rules for preparing Syrups.

I.

All the rules laid down for making decoctions, are likewiſe to be obſerved in the decoctions for ſyrups. Vegetables, both for decoctions and infuſions, ought to be dry, unleſs expreſsly ordered otherwiſe [*E.*]

II.

In the London pharmacopœia, only the pureſt or double-refined ſugar is allowed.

In the Edinburgh, the directions are leſs explicit. For ſuch ſyrups as are prepared without boiling, it is left to the choice of the operator to employ either the double-refined, or the common white ſugar; which latter he is directed to purify for thoſe ſyrups (not for the others) by previouſly diſſolving it in water, clarifying the ſolution with whites of eggs, and boiling it down to a thick conſiſtence, with care to take off the ſcum which riſes during the boiling.

In the ſyrups prepared by boiling, it has been cuſtomary to perform the clarification with whites of eggs, after the ſugar had been diſſolved in the decoction of the vegetable. This method is apparently injurious to the preparation: ſince not only the impurities of the ſugar are thus diſcharged; but a conſiderable part likewiſe of the medicinal matter, which the water had before taken up from the ingredients, is ſeparated along with them. Nor indeed is the clarification and deſpumation of the ſugar, by itſelf, very adviſeable; for its purification by this proceſs is not ſo perfect as might be expected; after it has undergone this proceſs, the refiners ſtill ſeparate from it a quantity of oily matter, which is diſagreeable to weak ſtomachs. See page 215. It appears therefore moſt eligible to employ fine ſugar for all the ſyrups; even the purgative ones (which have been uſually made with coarſe ſugar, as ſomewhat coinciding with their intention) not excepted; for, as purgative medicines are in general ungrateful to the ſtomach, it is certainly improper to employ an addition which increaſes their offenſiveneſs.

III.

Where the weight of the ſugar is not expreſſed, twenty-nine ounces thereof are to be taken to every pint of liquor. The ſugar is to be reduced into powder, and diſſolved in the liquor by the heat of a water-bath, unleſs ordered otherwiſe. [*L.*]

Although in the formulæ of ſeveral of the ſyrups, a double weight of ſugar to that of the liquor is directed, yet leſs will generally be ſufficient. Firſt therefore diſſolve in the liquor an equal weight of ſugar, then gradually add ſome more in powder, till a little remains undiſſolved at the bottom, which is to be afterwards incorporated by ſetting the ſyrup in a water-bath [*E.*]

The quantity of ſugar ſhould be ſo much, that the liquor may keep diſſolved in the cold: if there be more, a part of it will ſeparate, and concrete into cryſtals, or candy; if leſs, the ſyrup will be ſubject to ferment, eſpecially in warm weather, and change into a vinous or ſour liquor. If, in cryſtallizing, only the ſuperfluous ſugar ſeparated, it would be of no inconvenience; but, when part of the ſugar has candied, the remaining ſyrup is found to have an under proportion, and is as ſubject to fermentation as if it had wanted ſugar at firſt.

IV.

Copper veſſels, unleſs well tinned, ſhould not be employed in the making of acid ſyrups, or ſuch as are compoſed of the juices of fruits [*E.*]

The confectioners, who are the moſt dextrous people at theſe kinds of preparations, to avoid the expence of frequently new tinning their veſſels, rarely make uſe of any other than copper ones untinned, in the preparation even of the moſt acid ſyrups, as of oranges and lemons. Nevertheleſs, by taking due care that their coppers be well ſcoured and perfectly clean, and that the ſyrup remain no longer in them than is abſolutely neceſſary, they avoid giving it any ill taſte or quality from the metal. This practice, however, is by no means to be recommended to the apothecary.

V.

The ſyrup, when made, is to be ſet by till next day; if any ſaccharine cruſt appear upon the ſurface, take it off [*L.*]

SYRUPUS ex ALLIO.

Syrup of garlick.

Lond.

Take of

Garlick, ſliced, one pound;
Boiling water, two pints.

Macerate them in a cloſe veſſel for twelve hours, then ſtrain off the liquor, and diſſolve in it a proper quantity of ſugar, ſo as to make a ſyrup.

This ſyrup is occaſionally made uſe of for attenuating viſcid phlegm, and promoting expectoration in humoural aſthmas, and oppreſſions of the breaſt. In theſe caſes, it proves a medicine of conſiderable efficacy, though a very unpleaſant one: it taſtes and ſmells ſtrongly of the garlick. The college have received it as an alterative to the *oxymel ex allio*, for the uſe of thoſe with whom honey diſagrees.

SYRUPUS ex ALTHÆA.
Syrup of marſhmallows.
Lond.

Take of
Marſhmallow roots, freſh, one pound;
Double refined ſugar, four pounds;
Water, one gallon.

Boil the water with the roots, to one half: when grown thoroughly cold, pour off and preſs out the decoction, and ſet it by for a night to ſettle: next morning pour off the clear liquor, and adding to it the ſugar, boil the whole to the weight of ſix pounds.

Edinb.

Take of
Marſhmallow roots, nine ounces;
White ſugar, four pounds;
Water, ten pounds.

Boil the water with the marſhmallow roots to the conſumption of one-third, then ſtrain out the remaining decoction, and ſuffer it to reſt for ſome time. Pour off the clear liquor from the ſediment, and boil it with the ſugar over a gentle fire, keeping the matter continually ſtirring, till it becomes a ſyrup. This ſyrup ſupplies likewiſe the place of the pectoral ſyrup.

The ſyrup of marſhmallows ſeems to have been a ſort of favourite among diſpenſatory-writers, who have taken great pains to alter and amend it, but have been wonderfully tender in retrenching any of its articles. In the above preſcriptions, it is lopt of its ſuperfluities, without any injury to its virtues. It is uſed chiefly in nephritic caſes, for ſweetening emollient decoctions, and the like. Of itſelf, it can do little ſervice, notwithſtanding the high opinion which ſome have entertained of it; for what can be expected from two or three ſpoonfuls of the ſyrup, when the decoction, from which two or three pounds are made, may be taken at a draught or two? The college of Edinburgh has very properly united this and the pectoral ſyrup into one: for the ſyrup of marſhmallows has always, till this reformation, contained the principal ingredients of the pectoral ſyrup, and its own capital ingredient coincides in the ſame intention.

SYRUPUS e CORTICIBUS AURANTIORUM.
Syrup of orange peel.
Lond.

Take of the
Yellow rind of Seville orange peel, freſh, eight ounces;
Boiling water, five pints.

Macerate them for a night in a cloſe veſſel; next morning, ſtrain out the liquor, and diſſolve in it the proper quantity of ſugar for making it into a ſyrup.

Edinb.

Take of the
Yellow rind of orange peel, freſh, ſix ounces;
Boiling water, three pounds.

Infuſe them for a night in a cloſe veſſel, then ſtrain the liquor, let it ſtand to ſettle, and having poured it off clear from the ſediment, diſſolve therein twice its weight of white ſugar, ſo as to make it into ſyrup without boiling.

In making this ſyrup, it is particularly neceſſary, that the ſugar be previouſly powdered and diſſolved in the infuſion with as gentle a heat as poſſible, to prevent the exhalation of the volatile parts of the peel. With theſe cautions, the ſyrup proves a very elegant and agreeable one, poſſeſſing great ſhare of the fine flavour of the orange-peel.

SYRUPUS BALSAMICUS.

Balſamic ſyrup.

Lond.

Take of

Balſam of Tolu, eight ounces;

Water, three pints.

Boil them for two or three hours in a circulatory veſſel, or at leaſt in a long-necked matraſs, having its mouth lightly covered. When grown cold, ſtrain out the liquor, and mix therewith a proper quantity of ſugar to make it into a ſyrup.

The coction may be conveniently performed in a retort, with a receiver adapted to it, the liquor which comes over being occaſionally poured back; or the water may be entirely drawn off, and the ſugar diſſolved in the diſtilled liquor.

Edinb.

Take of the

Syrup of ſugar, juſt made, and warm from the fire, two pounds;

Tincture of balſam of Tolu, one ounce

When the ſyrup has grown almoſt cold, ſtir into it the tincture, by little at a time, agitating them well together, till perfectly united. The mixture is then to be kept in the heat of a water-bath until the ſpirit has exhaled.

This method of making the balſamic ſyrup was dropt in one of the preceding editions of the Edinburgh pharmacopœia, on a complaint that the ſpirit ſpoiled the taſte of the ſyrup; which it did in a great degree when the tincture was drawn with malt ſpirits; the nauſeous oil, with which all the common malt ſpirits are accompanied, being left in the ſyrup after the evaporation of the pure ſpirituous part. Particular care therefore ſhould be taken, that the ſpirit, employed for making the tincture, be perfectly clean, and well rectified from all ill flavour.

The intention of the contrivers of the two foregoing proceſſes ſeems to have been ſomewhat different. In the firſt, the more ſubtile and fragrant parts of the balſam are extracted from the groſſer reſinous matter, and alone retained in the ſyrup: the other ſyrup contains the whole ſubſtance of the balſam, in larger quantity. They are both moderately impregnated with the agreeable flavour of the balſam.

In ſome pharmacopœias, an elegant ſyrup of this kind is prepared from a tincture of balſam of Peru, with roſe-water, and a proper quantity of ſugar.

SYRUPUS CARYOPHYLLORUM RUBRORUM.

Syrup of clove july-flowers.

Lond.

Take of

Clove july-flowers, freſh gathered, and freed from the heels, three pounds;

Boiling water, five pints.

Macerate them for a night in a glaſs or glazed earthen veſſel; then ſtrain off the liquor, and diſſolve therein its due proportion of ſugar to make it into a ſyrup.

Edinb.

One pound of the flowers is to be

infuſed in four pounds of water, and the ſyrup made as above, without boiling.

This ſyrup is of an agreeable flavour, and a fine red colour; and for theſe it is chiefly valued.

* SYRUPUS COLCHICI.
Syrup of colchicum.
Edinb.

Take of
The root of colchicum, freſh and ſucculent, and cut into ſlices, one ounce;
Vinegar, ſixteen ounces.
Macerate the root in the vinegar two days, ſhaking the veſſel often; then ſtrain the liquor by gentle preſſure, and add the ſugar powdered; boil it gently to the conſiſtence of a ſyrup. Vide Colchicum.

SYRUPUS CROCI.
Syrup of Saffron.
Lond.

Take of
Saffron wine, one pint;
Double-refined ſugar, twenty-five ounces.
Diſſolve the ſugar in the wine, ſo as to make a ſyrup.

Saffron is very well fitted for making a ſyrup, as in this form a ſufficient doſe of it is contained in a reaſonable compaſs. This ſyrup is at preſent more frequently preſcribed than the wine from which it is made: it is a pleaſant cordial, and gives a fine colour to juleps.

SYRUPUS CYDONIORUM.
Syrup of quinces.
Lond.

Take of
Quince juice, depurated, three pints;
Cinnamon, one dram;
Cloves,
Ginger, each half a dram;
Red Port wine, one pint;
Double refined ſugar, nine pounds.
Digeſt the juice with the ſpices, in the heat of aſhes, for ſix hours; then adding the wine, paſs the liquor through a ſtrainer; and afterwards diſſolve in it the ſugar, ſo as to make a ſyrup.

If the quinces be kept for ſome time in an airy place, before the juice is preſſed out, the ſyrup proves rather more elegant, and richer of the fruit, than when they are taken freſh from the tree. In either caſe, the preparation is a very agreeable, mild, cordial reſtringent; and in ſome kinds of looſeneſſes and diſorders of the ſtomach, may be either taken by itſelf, in the quantity of a ſpoonful or two at a time, or employed for reconciling to the palate and ſtomach, medicines of the more ungrateful kind.

SYRUPUS KERMESINUS.
Syrup of kermes.
Edinb.

This ſyrup is brought to us ready made, from the ſouthern parts of France.

The ſyrup of kermes is of an agreeable taſte, and a fine red colour. It is accounted cordial and corroborant, and ſuppoſed to be particularly ſerviceable in weakneſſes and other diſorders of pregnant women.

SYRUPUS e SUCCO LIMONUM.
Syrup of lemon juice.
Lond.

Take of
Juice of lemons, ſuffered to ſtand till the feces have ſubſided, and afterwards ſtrained, two pints;

Double refined ſugar, fifty ounces.

Diſſolve the ſugar in the juice, ſo as to make a ſyrup thereof.

Edinb.

Take of

Lemon juice, depurated, two pounds and an half;

White ſugar, fifty ounces.

Make them into a ſyrup according to art, without boiling

After the ſame manner are prepared

SYRUPUS e SUCCO MORORUM.

Syrup of mulberries [*L.*]

SYRUPUS e SUCCO FRUCTUS RUBI IDÆI.

Syrup of raſpberries [*L.*]

All theſe are very pleaſant, cooling ſyrups, and in this intention are occaſionally made uſe of, in draughts and juleps, for quenching thirſt, abating heat, &c. in bilious or inflammatory diſtempers. They are ſometimes likewiſe employed in gargariſms for inflammations of the mouth and tonſils.

SYRUPUS e MECONIO, ſive DIACODION.

Syrup of meconium, or diacodium.

Lond.

Take of

White poppy heads, dried and cleared from the ſeeds, three pounds and a half;

Water, ſix gallons.

Cut the heads, and boil them in the water, ſtirring them now and then to prevent their burning, till only about one-third part of the liquor remains, which will be almoſt entirely ſoaked up by the poppies. Then remove the veſſel from the fire, ſtrongly preſs out the decoction, and boil it down to about four pints: ſtrain it whilſt hot, firſt through a ſieve, and afterwards through a fine woollen cloth: and ſet it by for a night, that the feces may ſubſide. Next morning, pour the liquor off clear, and boil it with ſix pounds of double-refined ſugar, until the weight of the whole be nine pounds, or a little more, that it may become a ſyrup of a proper conſiſtence.

SYRUPUS PAPAVERIS ALBI, ſeu de MECONIO, vulgo DIACODION.

Syrup of white poppies, or of meconium, commonly called diacodium.

Edinb.

Take of

White poppy heads, dried and freed from their ſeeds, two pounds;

Boiling water, thirty pounds;

The fineſt ſugar, four pounds.

Macerate the heads, cut in ſmall pieces, for a night; afterwards boil it till one third part only of the liquor remains; ſtrain it, and ſtrongly preſs out the remainder. Boil the ſtrained liquor to one half, and ſtrain it again; then add the ſugar, and boil it to a ſyrup.

These ſyrups, impregnated with the opiate matter of the poppy heads, are given to children in doſes of two or three drams; to adults, from half an ounce to an ounce and upwards, for obtunding and incraſſating acrimonious humours, eaſing pain, procuring reſt, and anſwering the other intentions of mild opiates. Particular care is requiſite in their preparation, that they may be always made, as near as poſſible, of the ſame ſtrength;

and accordingly the colleges have been very minute in their deſcription of the proceſs.

SYRUPUS PAPAVERIS ERRATICI.

Syrup of wild poppies.
Lond.

Take of
Wild poppy flowers, freſh, four pounds;
Boiling water, four pints and a half.
Pour the water on the poppies, ſet them over the fire, and frequently ſtir them, until the flowers be thoroughly moiſtened. As ſoon as they have ſunk under the water, let the whole be ſet by to ſteep for a night: next day pour off and preſs out the liquor, and ſet it by for a night longer to ſettle: afterwards add the proper quantity of double-refined ſugar to make it into a ſyrup.

The deſign of ſetting the flowers over the fire is (as Dr. Pemberton obſerves) that they may be a little ſcalded, ſo as to ſhrink enough to be all immerged in the water: without this artifice, they can ſcarce be all got in; but they are no longer to be continued over the fire, than till this effect is produced, leſt the liquor become too thick, and the ſyrup be rendered ropy.

This ſyrup has been recommended in diſorders of the breaſt, coughs, ſpitting of blood, pleuriſies, and other diſeaſes, both as an emollient, and as an opiate. It is one of the lighteſt of the opiate medicines, and in this reſpect ſo weak, that ſome have doubted of its having any anodyne quality.

SYRUPUS PECTORALIS.

Pectoral ſyrup.
Lond.

Take of
English maidenhair, dried, five ounces;
Liquorice, four ounces;
Boiling water, five pints.
Macerate them for ſome hours; then ſtrain out the liquor, and, with a proper quantity of double-refined ſugar, make it into a ſyrup.

The title of this compoſition expreſſes its medical intention. It is ſuppoſed to ſoften acrimonious humours, allay tickling coughs, and promote the expectoration of tough phlegm. The true maidenhair is the only ſort that has been uſually directed in theſe kinds of compoſitions: the uſe of the Engliſh is here very judiciouſly allowed; not only as being more eaſily procurable, and having been ſubſtituted for the other in the ſhops, but likewiſe as there does not ſeem to be any medicinal difference betwixt them. Fuller finds great fault with both theſe ingredients, on a ſuppoſition that all their virtues fly away in drying: but in this he certainly miſtook; for the virtues of both theſe maidenhairs conſiſt in a mucilaginous ſubſtance, which ſuffers no injury by being dried. There is one ſpecies indeed, the Canáda maidenhair, which has a conſiderable ſhare of a pleaſant ſmell and flavour joined to its mucilage; but this is as yet little known in the ſhops, though not uncommon in ſome of our gardens.

SYRUPUS e FLORIBUS PARALYSIS.

Syrup of cowſlips.
Lond.

This is made from cowſlip flowers, after the ſame manner as the ſyrup of clove july-flowers.

It has been ſuppoſed ſerviceable

in nervous diſorders; its agreeable flavour recommends it to the patient, though at preſent there are few who ſuppoſe it to poſſeſs any ſingular virtues.

SYRUPUS ROSARUM SOLUTIVUS.

Solutive ſyrup of roſes.

Lond.

Take the liquor that remains after the diſtillation of ſix pounds of damaſk roſes;
Of double-refined ſugar, five pounds.

Having preſſed out the liquor from the roſes, boil it down to three pints, and ſet it by for a night to ſettle. Next morning, pour it off clear from the ſediment, and adding the ſugar, boil the mixture to the weight of ſeven pounds and an half.

SYRUPUS ROSARUM PALLIDARUM.

Syrup of pale roſes.

Edinb.

Take of
Pale roſes, freſh gathered, one pound;
Boiling water, four pounds;
White ſugar, three pounds.

Macerate the roſes in the water for a night; then ſtrain the liquor, and adding to it the ſugar, boil them into a ſyrup.

This ſyrup may likewiſe be made from the liquor remaining after the diſtillation of roſe water, depurated from its feces.

The liquor remaining after the diſtillation of roſes (provided the ſtill has been perfectly clean) is as proper for making this ſyrup as a freſh infuſion: for the diſtillation only collects thoſe volatile parts, which are diſſipated in the air, whilſt the infuſion is boiling to its conſiſtence. This ſyrup is an agreeable and mild purgative for children, in the doſe of half a ſpoonful, or a ſpoonful. It likewiſe proves gently laxative to adults, and in this intention may be of ſervice in coſtive habits. Its principal uſe is in ſolutive glyſters.

SYRUPUS de ROSIS SICCIS.

Syrup of dry roſes.

Edinb.

Take of
Red roſes dried, ſeven ounces;
White ſugar, ſix pounds;
Boiling water, five pounds.

Infuſe the roſes in the water for a night, then boil them a little, ſtrain out the liquor, and, adding to it the ſugar, boil them to the conſiſtence of a ſyrup.

This ſyrup is ſuppoſed to be mildly aſtringent: but is principally valued on account of its red colour. The London college have omitted it, having retained others at leaſt equal to it in that reſpect.

SYRUPUS SCILLITICUS.

Syrup of ſquills.

Take of
Vinegar of ſquills, a pint and a half;
Cinnamon,
Ginger, each one ounce;
Double-refined ſugar, three pounds and a half.

Steep the ſpices in the vinegar for three days; then ſtrain out the liquor, and add the ſugar, ſo as to make a ſyrup.

Edinb.

Take of
Vinegar of ſquills, two pounds;
White ſugar, three pounds and an half.

Make them into a ſyrup, without boiling.

The ſpices, in the firſt of theſe

compoſitions, ſomewhat alleviate the offenſiveneſs of the ſquills, though not ſo much as to prevent the medicine from being diſagreeable. It is uſed chiefly in doſes of a ſpoonful or two, for attenuating viſcid phlegm, and promoting expectoration, which it does very powerfully.

SYRUPUS SIMPLEX.

The ſimple ſyrup.

Lond.

Diſſolve in water ſo much double-refined ſugar as will make it into a ſyrup.

SYRUPUS SACCHARI.

Syrup of ſugar.

Edinb.

Take of
White ſugar,
Water, each equal quantities.
Boil them into a ſyrup.

These preparations are plain liquid ſweets, void of flavour or colour. They are convenient for ſundry purpoſes where theſe qualities are not wanted, or would be exceptionable.

SYRUPUS e SPINA CERVINA.

Syrup of buckthorn.

Lond.

Take of the
Juice of ripe and freſh buckthorn berries, one gallon;
Cinnamon,
Ginger,
Nutmegs, each one ounce;
Double refined ſugar, ſeven pounds.

Set the juice by for ſome days, to ſettle; then paſs it through a ſtrainer, and in ſome part thereof macerate the ſpices. Boil the reſt of the juice, adding towards the end that part in which the ſpices were macerated, firſt paſſed through a ſtrainer: this part of the proceſs muſt be ſo managed, that the whole liquor may be reduced to four pints. Laſtly, put in the ſugar, and make the mixture into a ſyrup.

Edinb.

Take of
The juice of ripe buckthorn berries, depurated, ſeven pounds and an half;
White ſugar, three pounds and an half.
Boil them to the conſiſtence of a ſyrup.

Both theſe preparations, in doſes of three or four ſpoonfuls, operate as briſk cathartics. The principal inconveniencies attending them are, their being very unpleaſant, and their occaſioning a thirſt and dryneſs of the mouth and fauces, and ſometimes violent gripes. Both theſe may be prevented, by drinking liberally of water-gruel, or other warm liquids, during the operation. The ungratefulneſs of the buckthorn is endeavoured to be remedied in the firſt of the above preſcriptions, by the addition of aromatics, which, however, are ſcarcely ſufficient for that purpoſe. The ſecond alſo had formerly an aromatic material for the ſame intention, a dram of the eſſential oil of cloves; which being found ineffectual, is now rejected.

SYRUPUS VIOLARUM.

Syrup of violets.

Lond.

Take of
Violets, freſh, and well coloured, two pounds;
Boiling water, five pints.

Macerate them, for a whole day, in a glaſs, or at leaſt a glazed earthen veſſel; then pour out the liquor, and paſs it through a thin linen cloth, carefully avoiding even the lighteſt preſſure: afterwards adding the due proportion of ſugar, make it into a ſyrup.

Edinb.

Take of
March violets, freſh, one pound;
Boiling water, three pints.
Steep them together for a night in a glazed earthen veſſel, cloſe covered; then ſtrain out the liquor, and diſſolve in it twice its weight of white ſugar, ſo as to make a ſyrup without boiling.

This ſyrup is of a very agreeable flavour, and in the quantity of a ſpoonful or two, proves to children gently laxative. It is apt to loſe, in keeping, the elegant blue colour, for which it is chiefly valued; and hence ſome have been induced to counterfeit it with materials whoſe colour is more permanent. This abuſe may be readily diſcovered, by adding to a little of the ſuſpected ſyrup any acid or alkaline liquor. If the ſyrup be genuine, the acid will change its blue colour to a red, and the alkali will change it to a green; but if counterfeit, theſe changes will not happen. It is obvious, from this mutability of the colour of the violet, that the preſcriber would be deceived if he ſhould expect to give any blue tinge to acidulated or alkalized juleps or mixtures, by the addition of the blue ſyrup.

SYRUPUS ZINGIBERIS.

Syrup of ginger.

Lond.

Take of
Ginger, cut into thin ſlices, four ounces;
Boiling water, three pints.
Macerate them for ſome hours, then ſtrain out the liquor, and make it into a ſyrup with a proper quantity of double-refined ſugar.

Edinb.

Take of
Ginger, ſliced and bruiſed, three ounces;
White ſugar, ſeven pounds and an half.
Boiling water, four pounds.
Steep the ginger in the water, in a cloſe veſſel, for a night; then boil them a little, and having ſtrained out the decoction, ſet it by to ſettle. Pour off the clear liquor, add to it the ſugar, and make them into a ſyrup.

Theſe are agreeable and moderately aromatic ſyrups, lightly impregnated with the flavour and virtues of the ginger.

CONFECTIO ALKERMES.

Confection of kermes.

Take of
Juice of kermes grains, warmed and ſtrained, three pounds;
Damaſk roſe water, ſix ounces by meaſure;
Oil of cinnamon, half a ſcruple;
Double-refined ſugar, one pound.
Diſſolve the ſugar in the roſe water, by the heat of a water-bath, into a ſyrup; then mix in the juice of kermes, and after it has grown cold, the oil of cinnamon

Edinb.

Take of
Syrup of kermes, three pounds;
Yellow ſaunders,
Cinnamon, each ſix drams;
Cochineal, three drams;
Saffron, one dram and a half.
Evaporate the ſyrup, with a gentle heat, to the conſiſtence of honey; then mix with it the other ingredients reduced to a very fine powder.

Both

Both theſe compoſitions are elegant and agreeable cordials; the doſe, when taken by themſelves, is from a ſcruple to a dram or more. The firſt has an advantage of mixing uniformly in juleps, without ſpoiling their tranſparency, which the powders in the ſecond always do. Particular care ought to be had in the choice of the eſſential oil, which for the moſt part is grievouſly adulterated; it would be convenient to grind the oil with a little of the ſugar, before it is added to the other ingredients; for by theſe means it will mix more perfectly, and not be apt to ſeparate in keeping.

SECT. V.

Honeys and Oxymels.

THE more fixt parts of vegetables, diſſolved in watery liquors, may be thence transferred into honey, by mixing the honey with the watery decoction or juice of the plant, and boiling them together till the aqueous part has exhaled, and the honey remains of its original conſiſtence.

MEL ELATINES.
Honey of fluellin.
Lond.

Take of
Depurated juice of fluellin, four pints;
Clarified honey, four pounds.
Boil them to a due conſiſtence.

THIS preparation made its firſt appearance in a preceding edition of our pharmacopœia. It is very rarely made uſe of, and not often kept in the ſhops.

MEL HELLEBORATUM.
Honey of hellebore.
Lond.

Take of
White hellebore roots, dried and cut in ſlices, one pound;
Clarified honey, three pounds;
Water, four pints.
Let the roots be macerated in the water for three days, and then boiled a little; preſs out the liquor, and, having paſſed it again through a ſtrainer, boil it with the honey to a proper thickneſs.

PARTICULAR care ought to be had to reduce this preparation as nearly as poſſible to the honey conſiſtence, that its ſtrength may not be too uncertain. It acts, as a draſtic purgative or emetic, too violent and precarious for common uſe. It has been ſometimes given in maniacal caſes, in doſes of one or two drams and upwards; though more frequently employed in glyſters. The preſent practice very rarely makes uſe of it at all.

MEL MERCURIALE.
Honey of Mercury.

Take of
Juice of French-herb-mercury,
Honey, each three pounds.
Boil them together to the conſiſtence of honey, taking off the ſcum which riſes to the top.

THIS is deſigned chiefly for glyſters: it is very rarely made uſe of, and hence is now dropt both by the London and Edinburgh colleges.

MEL ROSACEUM.

Honey of roſes.

Lond.

Take of

Red roſe-buds, freed from the heels, and haſtily dried, four ounces;

Boiling water, three pints;

Clarified honey, five pounds.

Steep the roſes in the water for ſome hours; then ſtrain off the liquor, mix with it the honey, and boil them to a due conſiſtence.

Edinb.

Take of

Red roſes, dried, half a pound;

Boiling water, four pints;

Clarified honey, ſix pounds.

Steep the roſes in the water for a night, then ſtrain out the liquor, add to it the honey, and boil the mixture to the conſiſtence of honey.

This preparation is not unfrequently made uſe of as a mild cooling detergent, particularly in gargariſms for ulcerations and inflammation of the mouth and tonſils. The deſign of haſtily drying the roſes, as directed in the firſt of the above preſcriptions, is, that they may the better preſerve their aſtringency. See page 254.

MEL SOLUTIVUM.

Solutive honey.

Lond.

Take

The liquor remaining after the diſtillation of ſix pounds of damaſk roſes;

Cummin ſeeds, bruiſed a little, one ounce;

Brown ſugar, four pounds;

Honey, two pounds.

Having preſſed out the liquor, boil it to three pints; adding, toward the end, the ſeeds tied up in a linen cloth. Then put in the ſugar and honey, and boil down the mixture to the conſiſtence of thin honey.

This compoſition is very well contrived for the purpoſe expreſſed in its title. It is principally employed in laxative glyſters; and hence brown ſugar is here allowed; whilſt, for all other uſes, the double-refined is directed.

OXYMEL ex ALLIO.

Oxymel of garlick.

Lond.

Take of

Garlick, cut in ſlices, an ounce and an half;

Caraway ſeeds,

Sweet fennel ſeeds, each two drams;

Vinegar, half a pint;

Clarified honey, ten ounces by weight.

Boil the vinegar, for a little time, with the ſeeds bruiſed, in a glazed earthen veſſel; then add the garlick, and cover the veſſel cloſe: when grown cold, preſs out the liquor, and diſſolve in it the honey by the heat of a water-bath.

This oxymel is recommended for attenuating viſcid juices, promoting expectoration, and the fluid ſecretions in general. It is doubtleſs a medicine of conſiderable efficacy, though very unpleaſant; the flavour of the garlick prevailing, notwithſtanding the addition of the aromatic ſeeds.

OXYMEL PECTORALE.

Pectoral oxymel.

Edinb.

Take of

Elecampane roots, one ounce;

Florence orris roots, half an ounce;

Gum ammoniacum, one ounce;

Vinegar, half a pint;
Clarified honey, one pound;
Water, three pints.

Let the roots, cut and bruiſed, be boiled in the water till one third be waſted; then ſtrain off the liquor, let it ſtand to ſettle, and having poured it off clear from the feces, add to it the honey, and the ammoniacum, previouſly diſſolved in the vinegar. Mix them together, by boiling them a little.

The title of this compoſition expreſſes its medical virtues. It is deſigned for thoſe diſorders of the breaſt that proceed from a load of viſcid phlegm (which this medicine attenuates and promotes the expectoration of) and obſtructions of the pulmonary veſſels. Two or three ſpoonfuls may be taken every night and morning, and continued for ſome time.

OXYMEL SCILLITICUM.
Oxymel of ſquills.
Lond.

Take of
Clarified honey, three pounds;
Vinegar of ſquills, two pints.

Boil them in a glazed earthen veſſel, over a gentle fire, to the conſiſtence of a ſyrup.

Edinb.

Take of
Clarified honey, four pounds;
Vinegar of ſquills, two pints.

Boil them to the conſiſtence of a ſyrup.

The honey was formerly employed for this preparation unclarified; and the ſcum, which in ſuch caſes ariſes in the boiling, taken off. By theſe means, the impurities of the honey were diſcharged; but ſome of the medicinal parts of the ſquills, with which the vinegar was impregnated, were alſo ſeparated. For this reaſon the colleges both of London and Edinburgh have now judiciouſly ordered the honey, for all theſe kinds of preparations, to be previouſly clarified by itſelf.

Oxymel of ſquills is an uſeful aperient, detergent, and expectorant, and of great ſervice in humoural aſthmas, coughs, and other diſorders, where thick phlegm abounds. It is given in doſes of two or three drams, along with ſome aromatic water, as that of cinnamon, to prevent the great nauſea which it would otherwiſe be apt to excite. In large doſes, it proves emetic.

OXYMEL SIMPLEX.
Simple oxymel.
[*L. E.*]

Take of
Clarified honey, two pounds;
Vinegar, one pint.

Boil them to a due conſiſtence.

This ſimple preparation is not inferior in efficacy to many more elaborate compoſitions. It is an agreeable, mild, cooling, ſaponaceous, detergent, and attenuating medicine. It is often uſed in cooling, detergent gargariſms, and not unfrequently as an expectorant.

The boiling of oxymels in glazed earthen veſſels, is not free from danger. Their glazing is procured by a vitrification of lead; and vinegar, by a boiling heat, may corrode ſo much of vitrified lead, as to receive from it noxious qualities. See page 35.

CHAPTER V.

Separation and collection of thoſe parts of vegetable and animal ſubſtances, which are volatile in the heat of boiling water.

THERE are many vegetable, and ſome animal ſubſtances, whoſe virtues reſide, wholly or in part, in a matter which is capable of totally exhaling in the heat of boiling water. In moſt of the proceſſes hitherto deſcribed, it has been endeavoured, as much as poſſible, to preſerve this volatile matter along with the more fixt parts; whether thoſe fixt parts were themſelves medicinal, or only ſubſervient to the union of the volatile matter with the fluids employed. The aim, in the preſent chapter, will be to completely ſeparate this volatile ſubtile principle, and collect it pure from the groſſer fixt parts, either in a concentrated ſtate, or diluted with water or ſpirit of wine. In its concentrated ſtate, it appears commonly an oil; which, from its containing always the ſpecific odour, and frequently the other medicinal powers of the ſubject, is called *eſſential oil.*

SECT. I.

Eſſential Oils.

ESSENTIAL oils are drawn by diſtillation in an alembic, with a large refrigeratory. A quantity of water is added to the ſubject, ſufficient to prevent its burning; and, in this water, it is likewiſe macerated a little time before the diſtillation. The oil comes over along with the water; and either ſwims on its ſurface, or ſinks to the bottom, according as it is lighter or heavier than that fluid. [*L.*]

IN the Edinburgh pharmacopœia, ſome ſea ſalt is ordered to be added to the water ſufficient to give it a ſlight brackiſh taſte. The length of the maceration is to be varied according to the texture and compactneſs of the ſubject. The moſt tender ſubjects ſcarce require any. Thoſe of a ſoft and looſe texture are to be ſteeped for two or three days; and the more viſcous ones, for a longer time. The further the maceration is intended to be protracted, the greater quantity of ſea ſalt muſt be added. From viſcous ſubſtances the oil may be obtained in a ſhorter time, by ſubmitting them to a ſlight, and not too long continued, fermentation; in which caſe, the addition of ſalt is improper. Seeds and ſpices are to be bruiſed, and woods to be raſped, previouſly to the maceration or fermentation [*E.*]

Essential oils are obtained only from odoriferous ſubſtances; but not equally from all of this claſs, nor in quantity proportionable to their degree of odour; ſome which, if we were to reaſon from analogy, ſhould ſeem very well fitted for this proceſs yielding extremely little oil, and others none at all. Roſes and camomile flowers, whoſe ſtrong and laſting ſmell promiſes abundance, are found, upon experiment, to contain but a ſmall quantity. The violet and jaſmine flower, which perfume the air with their odour, loſe their ſmell upon the gentleſt coction, and do not afford the leaſt perceptible mark of oil upon being diſtilled, unleſs immenſe quantities be ſubmitted to the operation at once; whilſt ſavin, whoſe diſagreeable ſcent extends to no great diſtance, gives out the moſt oil of almoſt any vegetable known.

Nor are the ſame plants equally fit for this operation, when produced in different ſoils or ſeaſons; or at different times of their growth. Some yield more oil if gathered when the flowers begin to fall off, than at any other time; lavender and rue for inſtance. Others, as ſage, afford the largeſt quantity when young, before they have ſent forth any flowers; and others, as thyme, when the flowers have juſt appeared. All fragrant herbs yield a larger proportion of oil when produced in dry ſoils and warm ſummers, than in the oppoſite circumſtances. On the other hand, ſome of the diſagreable ſtrong ſcented ones, as wormwood, are ſaid to contain moſt in rainy ſeaſons, and moiſt rich grounds.

Several of the chemiſts have been of opinion, that herbs and flowers, moderately dried, yield a greater quantity of eſſential oil, than if they were diſtilled when freſh. It is ſuppoſed, that the oil being already blended, in freſh plants, with a watery fluid, great part of it remains diffuſed through the water after the diſtillation, divided into particles too minute to unite and be collected; whereas, in drying, the oily parts, on the exhalation of the moiſture which kept them divided and diſperſed, run together into globules, which have little diſpoſition to mingle with watery fluids, and eaſily ſeparate from the water employed in the diſtillation.

This theory, however, does not appear to be altogether ſatisfactory; for though the oil be collected in the ſubject into diſtinct globules, it does not riſe in that form, but reſolved into vapour, and blended and coagitated by the heat with the vapour of the water; and if the oil in a dry plant were leſs diſpoſed to unite with aqueous fluids than in a freſh one, the dry ought to yield a weaker infuſion than the freſh; the contrary of which is generally found to obtain. As the oil of the dry plant is moſt perfectly extracted, and kept diſſolved by the water before the diſtillation, I can ſee no reaſon why it ſhould have a greater tendency to ſeparate from the water afterwards.

The opinion of dry plants yielding moſt oil, ſeems to have ariſen from an obſervation of Hoffman, which has, I think, been miſunderſtood: "A pound, he ſays, of "dry ſpike flowers yields an ounce "of oil, but if they were diſtilled "freſh, they would ſcarcely yield "above half an ounce; and the "caſe is the ſame in balm, ſage, "&c. The reaſon is, that in dry-"ing, the watery humidity ex-

hales;

" hales; and as from two pounds " of a freſh plant we do not obtain above one pound of dry, " and little of the ſubtile oil evaporates in the drying, it follows, " that more oil ought to be afforded by the dry than by the freſh." The meaning of which I apprehend to be no more than this: that if two pounds of a freſh plant be, by drying, reduced to one, without any loſs of the oil, then the one pound dry ought to be equivalent to the two freſh. A later writer quotes an experiment of Neumann, which appears to be miſunderſtood in the ſame manner; for Neumann, in the place referred to, ſays only, that dry wormwood is found to yield much more oil than an *equal weight* of the freſh plant. I do not recollect any inſtance, in which freſh and dry plants have been brought to a fair compariſon, by dividing the quantity of the ſubject into two equal weights, and diſtilling one, while freſh, and the other, after it has been carefully and moderately dried.

But whatever may be the effect of moderate exſiccation, it is certain, that if the drying be long continued, the produce of oil will be diminiſhed, its colour altered, and its ſmell impaired.

With regard to the proportion of water, if whole plants, moderately dried, be uſed, or the ſhavings of woods, as much of either may be put into the veſſel, as, lightly preſſed, will occupy half its cavity; and as much water may be added, as will riſe up to two thirds its height. The water and ingredients, altogether, ſhould never take up more than three-fourths of the ſtill; there ſhould be liquor enough to prevent any danger of an empyreuma, but not ſo much as to be too apt to boil over into the receiver.

The maceration ſhould be continued ſo long, as that the water may fully penetrate the parts of the ſubject. To promote this effect, woods ſhould be thinly ſhaved acroſs the grain, roots cut tranſverſely into thin ſlices, barks reduced into coarſe powder, and ſeeds lightly bruiſed. Very compact and tenacious ſubſtances require the maceration to be continued a week or two, or longer; for thoſe of a ſofter and looſer texture, two or three days are ſufficient; whilſt ſome tender herbs and flowers not only ſtand not in need of any at all, but are even injured by it.

Whether the addition of ſea ſalt be of any real ſervice, is greatly to be doubted. The uſes generally aſſigned to it are, to penetrate and unlock the texture of the ſubject more effectually than ſimple water could do; and to prevent the fermentation or putrefaction, into which the matter is apt to run during the length of time that the maceration is often continued. But ſea ſalt ſeems rather to harden and condenſe, than to ſoften and reſolve, both vegetable and animal ſubjects; and if it prevent putrefaction, it muſt, on that very account, be rather injurious than of ſervice. The reſolution, here aimed at, approaches near to a beginning putrefaction; and ſaline ſubſtances, by retarding this, prolong the maceration far beyond the time that would otherwiſe be neceſſary. It is in the power of the operator, when he perceives the proceſs coming near this pitch, to put a ſtop to it at pleaſure, by proceeding immediately to diſtillation. By theſe means, the whole affair will be finiſhed in a very little time, with at leaſt equal advantage in every other reſpect; provided the manual operations of pounding, raſping, and the like which are equally neceſſary in either caſe, be ſcientifically complied with.

Bodies of a very viſcous and compact texture, are directed, in the Edinburgh pharmacopœia, to be fermented for ſome days with a little yeaſt: half their quantity of water is ſufficient for performing the fermentation; ſo much more as is neceſſary, is to be added afterwards, before the diſtillation. This proceſs undoubtedly promotes the reſolution of the ſubject, and the extrication of the oil; it rarely happens, however, that aſſiſtances of this kind are needful. Particular care muſt be had not to continue the fermentation too long; or to give a bad flavour to the oil by an ill-choſen ferment, or uſing too large a quantity of any.

Some chemiſts pretend, that by the addition of ſalts and acid ſpirits, they have been enabled to gain more oil from certain vegetable matters, than can poſſibly be got from them without ſuch aſſiſtance. Experiments made on purpoſe to ſettle this point ſeem to prove the contrary. This at leaſt is conſtantly found to be true; that where there is any reaſon to think the yield to be greater than uſual, the quality of the oil is proportionably injured. The quantity of true eſſential oil in vegetables can by no means be increaſed; and what is, really contained in them may be eaſily ſeparated without any addition of this kind. All that ſaline matters can do in this reſpect, is, to make the water ſuſceptible of a greater degree of heat than it can ſuſtain by itſelf, and thus enable it to carry up a groſs unctuous matter, not volatile enough to ariſe with pure water. This groſs matter, mingling with the pure oil, increaſes the quantity, but at the ſame time muſt neceſſarily debaſe its quality. And indeed, when water alone is made uſe of, the oil which comes over about the end of the operation is remarkably leſs fragrant, and of a thicker conſiſtence, than that which ariſes at the beginning; diſtilled a ſecond time, with a gentle heat, it leaves a large quantity of groſs, almoſt inſipid, reſinous matter behind.

The choice of proper inſtruments is of great conſequence to the performance of this proceſs to advantage. There are ſome oils, which paſs freely over the ſwan neck of the head of the common ſtill: others, leſs volatile, cannot eaſily be made to riſe ſo high. For obtaining theſe laſt, we would recommend a large low head, having a rim or hollow canal round it. In this canal the oil is detained on its firſt aſcent (and thence conveyed at once into the receiver), the advantages of which are ſufficiently obvious.

With regard to the fire, the operator ought to be expeditious in raiſing it at firſt, and to keep it up, during the whole proceſs, of ſuch a degree, that the oil may freely diſtil; otherwiſe, the oil will be expoſed to an unneceſſary heat, a circumſtance which ought as much as poſſible to be avoided. Fire communicates to all theſe oils a diſagreeable impreſſion, as is evident from their being much leſs grateful when newly diſtilled, than after they have ſtood for ſome time in a cool place; the longer the heat is continued, the more alteration it muſt produce in them.

The greater number of oils require for their diſtillation the heat of water ſtrongly boiling; but there are many alſo which riſe with a conſiderable leſs heat: ſuch as thoſe of lemon-peel, citron-peel, oils of the flowers of lavender and roſemary, and of almoſt all the more odoriferous kinds of flowers. We have already obſerved, that theſe flowers have their fragrance greatly injured, or even deſtroyed, by beating or bruiſing them. It is impaired alſo by the immerſion in water, in the preſent proceſs; and the more ſo in proportion to the continuance of the immerſion, and the heat. Hence theſe oils, diſtilled in the common manner, prove much leſs agreeable in ſmell than the ſubjects themſelves. For the diſtillation of ſubſtances of this claſs, I have contrived another method. Inſtead of being immerſed in water, they are expoſed only to its vapour. A proper quantity of water being put into the bottom of the ſtill, the odoriferous herbs or flowers are laid lightly in a baſket, of ſuch a ſize that it may enter into the ſtill, and reſt againſt its ſides, juſt above the water. The head being then fitted on, and the water made to boil, the ſteam, percolating through the ſubject, imbibes the oil, without impairing its fragrance, and carries it over into the receiver. Oils thus obtained, poſſeſs the odour of the ſubject in an exquiſite degree, and have nothing of the diſagreeable ſcent perceivable in thoſe diſtilled by boiling them in water in the common manner.

It may be proper to obſerve, that thoſe oils, which riſe with a leſs heat than that of boiling water, are generally called, by the chemical and pharmaceutical writers, *light* oils; and thoſe which require the heat of water ſtrongly boiling, are called *ponderous*. I have avoided theſe expreſſions, as they might be thought to relate to the comparitive *gravities* of the oils; with which the volatility or fixedneſs have no connection. Oil olive is lighter than moſt of the eſſential oils; but the heat requiſite to make it diſtil exceeds that in which the heavieſt eſſential oil diſtils, conſiderably more than the heat of boiling water exceeds that of ice.

The water employed in the diſtillation of eſſential oils, always imbibes ſome portion of the oil; as is evident from the ſmell, taſte, and colour which it acquires. It cannot however retain above a certain quantity; and therefore ſuch as has been already uſed, and almoſt ſaturated itſelf, may be advantageouſly employed, inſtead of common water, in a ſecond, third, or any future diſtillation of the ſame ſubject.

Some late chemical writers recommend, not the water which comes over, but that which remains in the ſtill, to be uſed a ſecond time. This can be of no ſervice; as containing only ſuch parts of the vegetable as are not capable of ariſing in diſtillation, and which ſerve only to impede the action of the water as a menſtruum, and to endanger an empyreuma.

After the diſtillation of one oil, particular care ſhould be had to duly cleanſe the worm before it is employed in the diſtillation of a different plant. Some oils, thoſe of wormwood and aniſeeds for inſtance, adhere to it ſo tenaciouſly, as not to be melted out by heat, or waſhed off by water. The beſt way of cleanſing the worm from theſe, is to run a little ſpirit of wine through it.

Eſſential oils, after they are diſtilled, ſhould be ſuffered to ſtand for ſome days, in veſſels looſely covered with paper, till they have loſt their diſagreeable fiery odour, and become limpid: then put them up in ſmall bottles, which are to be kept quite full, cloſely ſtopt, in a cool place. With theſe cautions, they will retain their virtues in perfection for many years.

When careleſsly kept, they in time gradually loſe their flavour, and become groſs and thick. Some endeavour to recover them again, after they have undergone this change, by grinding them with about thrice their weight of common ſalt, then adding a large proportion of water, and diſtilling them afreſh. The purer part ariſes thin and limpid, poſſeſſing a great degree of the priſtine ſmell and taſte of the oil, though inferior in both reſpects to what the oil was at firſt. This rectification, as it is called, ſucceeds equally without the ſalt. The oils, when thus altered, are nearly in the ſame ſtate with the turpentines, and other thickened oily juices, which readily yield their purer oil in diſtillation with water alone.

When eſſential oils have entirely loſt their ſmell, ſome recommend adding them in the diſtillation of a freſh quantity of the oil of the ſame plant; by which means they are ſaid to ſatiate themſelves anew with the odorous matter, and become entirely renovated. This practice, however, ought doubtleſs to be diſapproved, as being no other than a ſpecious ſophiſtication; for it can do no more than to divide, between the old oil and the new, the active matter which belongs to the new alone.

Eſſential oils, medicinally conſidered, agree in the general qualities of pungency and heat; in particular virtues, they differ as much as the ſubjects from which they are obtained, the oil being the direct principle in which the virtues, or part of the virtues, of the ſeveral ſubjects reſide. Thus the carminative virtue of the warm ſeeds, the diuretic of juniper berries, the emmenagogue of ſavin, the nervine of roſemary, the ſtomachic of mint, the antiſcorbutic of ſcurvy-graſs, the cordial of aromatics, &c. are concentrated in their oils.

There is another remarkable difference in eſſential oils, the foundation of which is leſs obvious; that of the degree of their pungency and heat; which are by no means in proportion, as might be expected, to thoſe of the ſubject they were drawn from. The oil of cinnamon, for inſtance, is exceſſively pungent and fiery; in its undiluted ſtate, it is almoſt cauſtic: whereas cloves, a ſpice which in ſubſtance is far more pungent than the other, yields an oil which is far leſs ſo. This difference ſeems to depend partly upon the quantity of oil afforded, cinnamon yielding much leſs than cloves, and conſequently having its active matter concentrated into a ſmaller volume; partly, upon a difference in the nature of the active parts themſelves: for though eſſential oils contain always the ſpecific odour and flavour of their ſubjects, whether grateful or ungrateful, they do not always contain the whole pungency: this reſides frequently in a more fixt reſinous matter, and does not riſe with the oil. After the diſtillation of cloves, pepper, and ſome other ſpices, a part of their pungency is found to remain behind: a ſimple tincture of them in rectified ſpirit of wine is even more pungent than their pure eſſential oils.

The more grateful oils are frequently made uſe of for reconciling to the ſtomach medicines of themſelves diſguſtful. It has been cuſtomary

tomary to employ them as correctors for the reſinous purgatives; an uſe to which they do not ſeem to be well adapted. All the ſervice they can here be of, is to make the reſin ſit eaſier at firſt on the ſtomach: far from abating the irritating quality upon which the virulence of its operation depends, theſe pungent oils ſuperadd a freſh ſtimulus. See the article Cathartics.

Eſſential oils are never given alone, on account of their extreme heat and pungency; which in ſome is ſo great, that a ſingle drop, let fall upon the tongue, produces a gangrenous eſchar. They are readily imbibed by pure dry ſugar, and in this form may be conveniently exhibited. Ground with eight or ten times their weight of the ſugar, they become ſoluble in aqueous liquors, and thus may be diluted to any aſſigned degree. Mucilages alſo render them miſcible with water into an uniform milky liquor. They diſſolve likewiſe in ſpirit of wine: the more fragrant in an equal weight, and almoſt all of them in leſs than four times their own quantity. Theſe ſolutions may be either taken on ſugar, or mixed with ſyrups, or the like: on mixing them with water, the liquor grows milky, and the oil ſeparates.

The more pungent oils are employed externally againſt paralytic complaints, numbneſs, pains and aches, cold tumours, and in other caſes where particular parts require to be heated or ſtimulated. The tooth-ach is ſometimes relieved by a drop of theſe almoſt cauſtic oils, received on cotton, and cautiouſly introduced into the hollow tooth.

OLEUM ABSINTHII ESSENTIALE.

Eſſential oil of the leaves of wormwood.

L. E.

This is one of the more ungrateful oils: it ſmells ſtrongly of the wormwood, and contains its particular nauſeous taſte; but has little or nothing of its bitterneſs, this remaining entire in the decoction left after the diſtillation. Its colour, when drawn from the freſh herb, is a dark green; from the dry, a browniſh yellow. This oil is recommended by Hoffman as a mild anodyne, in ſpaſmodic contractions: for this purpoſe, he directs a dram of it to be diſſolved in an ounce of rectified ſpirit of wine, and ſeven or eight drops of the mixture taken for a doſe in any convenient vehicle. Boerhaave greatly commends, in tertian fevers, a medicated liquor compoſed of about ſeven grains of the oil, ground firſt with a dram of ſugar, then with two drams of the ſalt of wormwood, and afterwards diſſolved in ſix ounces of the diſtilled water of the ſame plant. Two hours before the fit is expected, the patient is to bathe his feet and legs in warm water, and then to drink two ounces of the liquor every quarter of an hour till the two hours are expired. By theſe means, he ſays, all caſes of this kind are generally cured with eaſe and ſafety, provided there is no ſchirroſity or ſuppuration. With us, the oil of wormwood is employed chiefly as a vermifuge, and for this purpoſe is both applied externally to the belly, and taken internally. It is moſt conveniently exhibited in the form of pills, which it may be reduced into by mixing it with crumb of bread.

OLEUM SEMINUM ANETHI ESSENTIALE.

Eſſential oil of dill ſeeds.

Lond.

This is a very warm oil; of a flavour not very agreeable, leſs ſo than that of the ſeeds. It is ſometimes given as a carminative, in flatulencies, colicky pains, hiccups, and the like, from one to three or four drops.

OLEUM SEMINUM ANISI ESSENTIALE.
Eſſential oil of aniſeeds.
L. E.

This oil poſſeſſes the taſte and ſmell of the aniſeeds in perfection. It is one of the mildeſt of the diſtilled oils. Fifteen or twenty drops may be taken at a time without danger, though common practice rarely goes ſo far as half this number. Its ſmell is extremely durable and diffuſive. Milk drawn from the breaſt, after taking it, is found impregnated with its odour; and poſſibly this may be, in part, the foundation of the pectoral virtues uſually aſcribed to it. In flatulencies and colics, it is ſaid by ſome to be leſs effectual than the ſeeds themſelves.

It is remarkable of this oil, that it congeals, even when the air is not ſenſibly cold, into a butyraceous conſiſtence: and hence, in the diſtillation of it, the operator ought not to be over-ſolicitous in keeping the water in the refrigeratory too cool: it behoves him rather to let it grow ſomewhat hot, particularly towards the end of the proceſs; otherwiſe the oil congealing, may ſo ſtop up the worm, as to endanger blowing off the head of the ſtill; at leaſt a conſiderable quantity of oil will remain in it.

OLEUM SEMINUM CARUI ESSENTIALE.
Eſſential oil of caraway ſeeds.
L. E.

The flavour of this exactly reſembles that of the caraway. It is a very hot and pungent oil; a ſingle drop is a moderate doſe, and five or ſix a very large one. It is not unfrequently made uſe of as a carminative; and ſuppoſed by ſome to be peculiarly ſerviceable for promoting urine, to which it communicates ſome degree of its ſmell.

OLEUM CARYOPHYLLORUM AROMATICORUM ESSENTIALE.
Eſſential oil of cloves.
L. E.

This oil is ſo ponderous as to ſink in water, and is not eaſily elevated in diſtillation: if the water which comes over be returned on the remaining cloves, and the diſtillation repeated, ſome more oil will generally be obtained, though much inferior in quality to the firſt. The oil of cloves is uſually deſcribed as being "in taſte exceſſively hot and fiery, and of a gold yellow colour." (*Boerh. proceſſ.* 27.) Such indeed is the compoſition which we receive under this name from Holland: but the genuine oil of cloves is one of the milder oils: it may be taken with great ſafety (duly diluted) to the quantity of ten or twelve drops or more. Nor is its colour at all yellow, unleſs it has been long and careleſsly kept, or diſtilled by too violent a fire. When in perfection, it is limpid and colourleſs, of a pleaſant, moderately warm and pungent taſte, and a very agreeable ſmell, much reſembling that of the ſpice itſelf. The Dutch oil of cloves contains a large quantity of expreſſed oil, as evidently appears upon examining it by diſtillation. This however cannot be the addition to which it owes its acrimony. A ſmall proportion of a reſinous extract of cloves communicates to a large one of oil a deep colour, and a great degree of acrimony.

OLEUM

OLEUM FLORUM CHAMÆMELI ESSENTIALE.

Eſſential oil of camomile flowers.

Lond.

This is a very pungent oil, of a ſtrong not ungrateful ſmell, reſembling that of the flowers. Its colour is yellow, with a caſt of greeniſh or brown. It is ſometimes given in the doſe of a few drops, as a carminative, in hyſteric diſorders, and likewiſe as a vermifuge. It may be conveniently made into pills with crumb of bread.

The oil above deſcribed is that obtained from the common garden camomile, which is the only ſort directed in our diſpenſatories (ſee the foregoing part, page 124.) There is another ſpecies, more frequent in corn-fields than in our gardens (*chamæmælum vulgare Ger. Raii ſynopſ. ed.* 3. 288.) which yields a beautiful blue oil: this colour, if the oil be carefully kept, remains for many years: but if the air be not perfectly excluded, ſoon degenerates into a yellow like that of the foregoing.

OLEUM CINNAMOMI.

Oil of cinnamon.

L. E.

This valuable oil is extremely hot and pungent, of a moſt agreeable flavour, like that of the cinnamon itſelf. In cold languid caſes, and debilities of the nervous ſyſtem, it is one of the moſt immediate cordials and reſtoratives. The doſe is one, two, or three drops: which muſt always be carefully diluted by the mediation of ſugar, &c. for ſo great is the pungency of this oil, that a ſingle drop let fall upon the tongue, undiluted, produces, as Boerhaave obſerves, a gangrenous eſchar. In the diſtillation of this oil, a ſmart fire is required; and the low head, with a channel round it, before recommended for the diſtillation of the leſs volatile oils, is particularly neceſſary for this, which is one of the leaſt volatile, and which is afforded by the ſpice in exceeding ſmall quantity. The diſtilled water retains no ſmall portion of the oil; but this oil being very ponderous, great part of it ſubſides, from the water, on ſtanding for two or three weeks in a cool place.

OLEUM SEMINUM CYMINI ESSENTIALE.

Eſſential oil of cummin ſeeds.

Lond.

This is one of the warmer and leſs pleaſant oils. It is employed chiefly in cold, flatulent, hyſteric complaints, in doſes of two or three drops. It gives its ſmell ſtrong to the urine, and is ſuppoſed peculiarly ſerviceable for promoting its diſcharge.

OLEUM SEMINUM FŒNICULI ESSENTIALE.

Eſſential oil of fennel ſeeds.

Edinb.

The oil obtained from ſweet fennel ſeeds is much more elegant and agreeable than that of the common fennel. It is one of the mildeſt of theſe preparations. It is nearly of the ſame degree of warmth with that of aniſeeds; to which it is likewiſe ſimilar in flavour, though far more grateful. It is given from two or three drops to ten or twelve, as a carminative, in cold indiſpoſitions of the ſtomach; and in ſome kinds of coughs, for promoting expectoration.

OLEUM foliorum HYSSOPI ESSENTIALE.

Eſſential oil of hyſſop leaves.

The oil of hyſſop is moderately acrid, of a ſtrong not very agreeable ſmell, exactly reſembling the original herb. Its colour is yellowiſh,

iſh, with a ſlight caſt of green; which, in keeping, changes to a browniſh colour. It is commended in humoural aſthmas, for promoting expectoration, &c. from one to two or three drops; but it is rarely made uſe of, and not often kept in the ſhops; for which reaſon, it is now omitted both by the London and Edinburgh colleges.

OLEUM baccarum JUNIPERI ESSENTIALE.

Eſſential oil of juniper berries.

L. E.

This oil is a very warm and pungent one, of a ſtrong flavour, not unlike that of the berries. In the doſe of a drop or two, it proves a ſerviceable carminative and ſtomachic. In one of ſix, eight, or more, a ſtimulating, detergent, diuretic and emmenagogue. It ſeems to have ſomewhat of the nature of the turpentines, or their diſtilled oil; like which it communicates a violet ſmell to the urine.

The oil of theſe berries reſides partly in veſicles ſpread through the ſubſtance of the fruit, and partly in little cells contained in the ſeeds; when the berry is dry, and the oil hardened into a reſinous ſubſtance, it becomes viſible, upon breaking the ſeeds, in form of little tranſparent drops. In order therefore to obtain this oil to advantage, we ought, previouſly to the diſtillation, to bruiſe the berry thoroughly; ſo as to break the ſeeds, and entirely lay open the oily receptacles.

OLEUM florum LAVENDULÆ ESSENTIALE.

Eſſential oil of lavender flowers.

L. E.

This oil, when in perfection, is very limpid, of a pleaſant yellowiſh colour, extremely fragrant, poſſeſſing in an eminent degree the peculiar ſmell generally admired in the flowers. It is a medicine of great uſe, both externally and internally, in paralytic and lethargic complaints, rheumatic pains, and debilities of the nervous ſyſtem. The doſe is from one drop to five or ſix.

Lavender flowers yield the moſt fragrant oil, and in conſiderably the largeſt quantity, when they are ready to fall off ſpontaneouſly, and the ſeeds begin to ſhew themſelves; the leaves give out extremely little. The flowers may be ſeparated from the reſt of the plant, by drying it a little, and then gently beating it: they ſhould be immediately committed to diſtillation, and the proceſs conducted with a well-regulated gentle heat: too great heat would not only change the colour of the oil, but likewiſe make a diſagreeable alteration in its ſmell.

OLEUM baccarum LAURI ESSENTIALE.

Eſſential oil of bayberries.

The oil of bayberries is thin and limpid, moderately pungent, of a ſtrong and tolerably grateful ſmell. It is given in flatulent colics, hyſteric complaints, and for allaying the pains conſequent upon delivery; the doſe, from two drops to five or ſix. It is likewiſe made an ingredient in carminative glyſters; and in ſome hyſteric caſes, is applied externally.

ESSENTIA LIMONUM [*L.*] OLEUM corticum LIMONUM [*E.*]

Eſſence of lemons, or the eſſential oil of lemon-peel.

This is a pleaſant oil, of a fine ſmell, very near as agreeable as that of the freſh peel; it is one of the lighteſt and moſt volatile eſſential oils we have, perfectly limpid, and almoſt colourleſs. It is taken in doſes of two or three drops, as a cordial, in weakneſs of the ſtomach, &c. though more frequently uſed as a perfume. It gives a fine flavour to the officinal ſpiritus volatilis aromaticus, and occaſions the ſoap pills to ſit eaſy on the ſtomach.

OLEUM MACIS ESSENTIALE.

Eſſential oil of mace.

The eſſential oil of mace is moderately pungent, very ſubtile and volatile, of a ſtrong aromatic ſmell, like that of the ſpice itſelf: it is thin and limpid, of a pale yellowiſh colour, with a portion of thicker and darker-coloured oil at the bottom. This oil is celebrated in vomiting, hiccups, colicky pains, &c. both given internally from one to four drops, and applied externally to the ſtomach and umbilical region. It is however but rarely made uſe of, and not often met with in the ſhops.

OLEUM MARJORANÆ ESSENTIALE.

Eſſential oil of marjoram leaves.

Lond.

This oil is very hot and penetrating, in flavour not near ſo agreable as the marjoram itſelf: when in perfection, it is of a pale yellow colour: by long keeping, it turns reddiſh: if diſtilled with too great a heat, it ariſes of this colour at firſt. It is ſuppoſed to be peculiarly ſerviceable in relaxations, obſtructions, and mucous diſcharges of the uterus: the doſe is one or two drops.

OLEUM MENTHÆ ESSENTIALE.

Eſſential oil of the leaves of common mint.

L. E.

This oil ſmells and taſtes ſtrongly of the mint, but is in both reſpects ſomewhat leſs agreable than the herb itſelf. It is an uſeful ſtomachic medicine; and not unfrequently exhibited in want of appetite, weakneſs of the ſtomach, reachings to vomit, and ſimilar diſorders, when not accompanied with heat or inflammation: two or three drops, or more, are given for a doſe. It is likewiſe employed externally for the ſame purpoſes; and is an excellent ingredient in the ſtomachic plaſter of the ſhops.

OLEUM MENTHÆ PIPERITIDIS ESSENTIALE.

Eſſential oil of the leaves of peppermint.

Lond.

This poſſeſſes the ſmell, taſte, and virtues of the peppermint in perfection; the colour is a pale greeniſh yellow. It is a medicine of great pungency and ſubtility; and diffuſes, almoſt as ſoon as taken, a glowing warmth through the whole ſyſtem. In colics, accompanied with great coldneſs, and in ſome hyſteric complaints, it is of excellent ſervice. A drop or two are in general a ſufficient doſe.

OLEUM NUCIS MOSCHATÆ ESSENTIALE.

Eſſential oil of nutmegs.

L. E.

The eſſential oil of nutmegs poſſeſſes the flavour and aromatic virtues of the ſpice in an eminent degree. It is ſimilar in quality to the oil of mace, but ſomewhat leſs grateful.

OLEUM ORIGANI ESSENTIALE.

Eſſential oil of the leaves of origanum.

L. E.

This oil has a very pungent acrimonious taſte, and a penetrating ſmell. It has been chiefly employed externally as an errhine, and for eaſing pains of the teeth.

OLEUM ESSENTIALE PIPERIS JAMAICENSIS.

Eſſential oil of Jamaica pepper.

Edinb.

This is a very elegant oil, and may be uſed as a ſuccedaneum to the oils of ſome of the dearer ſpices. It is of a fine pale colour, in flavour more agreable than the oil of cloves, and not far ſhort of that of nutmegs. It ſinks in water, like the oils of ſome of the eaſtern ſpices.

OLEUM PULEGII ESSENTIALE.

Eſſential oil of the leaves of pennyroyal.

L. E.

This oil, in ſmell and taſte, reſembles the original plant; the virtues of which it likewiſe poſſeſſes. It is given in hyſteric caſes, from one to four or five drops.

OLEUM RORISMARINI ESSENTIALE.

Eſſential oil of roſemary.

L. E.

The oil of roſemary is drawn from the plant in flower. When in perfection, it is very light and thin, pale, and almoſt colourleſs; of great fragrancy, though not quite ſo agreable as the roſemary itſelf. It is recommended, in the doſe of a few drops, in nervous and hyſteric complaints. Boerhaave holds it in great eſteem againſt epilepſies, and ſuppreſſions of the uterine purgations, occaſioned by weakneſs and inactivity.

OLEUM LIGNI RHODII ESSENTIALE.

Eſſential oil of rhodium.

L. E.

This oil is extremely odoriferous, and principally employed as a perfume in ſcenting pomatums, and the like. Cuſtom has not as yet received any preparation of this elegant aromatic wood into internal uſe.

OLEUM RUTÆ ESSENTIALE.

Eſſential oil of rue leaves.

L. E.

The oil of rue has a very acrid taſte, and a penetrating ſmell, reſembling that of the herb, but rather more unpleaſant. It is ſometimes made uſe of in hyſteric diſorders, and as an anthelmintic; as alſo in epilepſies proceeding from a relaxed ſtate of the nerves.

Rue yields its oil very ſparingly. The largeſt quantity is obtained from it when the flowers are ready to fall off, and the ſeeds begin to ſhew themſelves. Suitable maceration, previous to the diſtillation, is here extremely neceſſary.

OLEUM SABINÆ ESSENTIALE.

Eſſential oil of ſavin leaves.

L. E.

Savin is one of the plants which, in former editions of the Edinburgh pharmacopœia, were directed to be lightly fermented before the diſtillation: this, however, is not very neceſſary: for ſavin yields, without any fermentation, and even without much maceration, a very large quantity of oil: the foregoing herb ſtands more in need of a treatment of this kind. The oil of ſavin is a celebrated uterine and emmenagogue: in cold phlegmatic habits, it is undoubtedly a medicine of good ſervice, though not capable of performing what it has been uſually repreſented to do. The doſe is, two or three drops or more.

OLEUM SASSAFRAS ESSENTIALE.

Eſſential oil of ſaſſafras.

L. E.

This is the moſt ponderous of all the known eſſential oils, but riſes in diſtillation with ſufficient eaſe: it appears limpid as water, has a moderately pungent taſte, a very fragrant ſmell, exactly reſembling that of the ſaſſafras. It ſtands greatly commended as a ſudorific, and for purifying the blood and juices: it is likewiſe ſuppoſed to be of ſervice in humoural aſthmas and coughs. The doſe is from one drop to eight or ten; though Geoffroy goes as far as twenty.

The decoction remaining after the diſtillation of the oil, affords by inſpiſſation (ſee chap. vi.) an uſeful extract, of a mild, bitteriſh, ſubaſtringent taſte. Hoffman ſays, he has given it with great benefit, in doſes of a ſcruple, as a corroborant in cachectic caſes, in the decline of intermitting fevers, and for abating hypochondriacal ſpaſms.

OLEUM TEREBINTHINÆ.

Oil of turpentine.

L. E.

This is diſtilled in the ſame manner as the foregoing oils, and is ſtrictly an eſſential one, though not uſually ranked in this claſs. It is commonly, but improperly, as the college obſerve, called ſpirit of turpentine. It is employed in large quantities for ſome mechanic purpoſes, and hence the diſtillation of it is become a particular buſineſs. This oil is a very hot ſtimulating medicine (ſee page 240). It is ſometimes given as a ſudorific and diuretic, in the doſe of two or three drops: in larger doſes, it is apt greatly to heat the body, occaſion pain of the head, and effuſion of the ſemen and liquor of the proſtrate glands. It has nevertheleſs been taken in conſiderable doſes (along with honey or other convenient vehicles) againſt the ſciatica; and, as is ſaid, with good ſucceſs. Some have recommended it againſt venereal runnings: but here it has produced miſchievous conſequences, inflaming the parts and aggravating the diſorder. Externally it is not unfrequently employed againſt rheumatic pains, aches, ſprains, for diſcuſſing cold tumours, and reſtraining hæmorrhages.

After the diſtillation of the turpentine, there remains in the ſtill, a brittle reſinous ſubſtance, of a yellow colour, called *reſina flava*, yellow reſin [*L.*]

The only uſe of this is in external applications, for giving conſiſtence to plaſters, and the like purpoſes.

Most of the foregoing oils are drawn by our chemiſts, and eaſily procurable in a tolerable degree of perfection; thoſe of cinnamon, cloves, nutmegs, and mace, excepted. Theſe are uſually imported; and are for the moſt part ſo much adulterated, that it is difficult to meet with ſuch as are at all fit for uſe.

Nor are the adulterations of theſe kinds of preparations eaſily diſcoverable. The groſſer abuſes indeed may be readily detected: thus if the oil be mixed with ſpirit of wine, it will turn milky on the addition of water; if with expreſſed oils, rectified ſpirit will diſſolve the eſſential, and leave the other behind; if with oil of turpentine, on dipping a piece of paper in the mixture, and drying it with a gentle the heat, the turpentine will be betrayed by its ſmell. But the more ſubtle artiſts have contrived other methods of ſophiſtication, which elude all trials of this kind.

Some have looked upon the ſpecific gravity of oils as a certain criterion of their genuineneſs; and accordingly we have given a table of the gravity of ſeveral in page 38. This however is not to be abſolutely depended on: for the genuine oils, obtained from the ſame ſubjects, oftentimes differ in gravity as much as thoſe drawn from different ones. Cinnamon and cloves, whoſe oils uſually ſink in water, yield, if ſlowly and warily diſtilled, an oil of great fragrancy, which is nevertheleſs ſpecifically lighter than the aqueous fluid employed in the diſtillation of it; whilſt, on the other hand, the laſt runnings of ſome of the lighter oils prove ſometimes ſo ponderous as to ſink in water

As all eſſential oils agree in the general properties of ſolubility in ſpirit of wine, indiſſolubility in water, miſcibility with water by the intervention of certain intermedia, volatility in the heat of boiling water, &c. it is plain that they may be variouſly mixed with one another, or the dearer ſophiſticated with the cheaper, without any poſſibility of diſcovering the abuſe by any trials of this kind. And indeed it would not be of much advantage to the purchaſer, if he had infallible criteria of the genuineneſs of every individual oil. It is of as much importance, that they be *good*, as that they be *genuine*; for I have often ſeen genuine oils, from incurious diſtillation, and long and careleſs keeping, weaker both in ſmell and taſte than the common ſophiſticated ones.

The ſmell and taſte ſeem to be the only certain teſts that the nature of the thing will admit of. If a bark ſhould have in every reſpect the appearance of good cinnamon, and ſhould be proved indiſputably to be the genuine bark of the cinnamon tree; yet, if it want the cinnamon flavour, or have it but in a low degree, we reject it; and the caſe is the ſame with the oil. It is only from uſe and habit, or compariſons with ſpecimens of known quality, that we can judge of the goodneſs, either of the drugs themſelves, or of their oils.

Moſt of the eſſential oils, indeed, are too hot and pungent to be taſted with ſafety; and the ſmell of the ſubject is ſo much concentrated in them, that a ſmall variation in this reſpect is not eaſily diſtinguiſhed. But we can readily dilute them to any aſſignable degree. A drop of the oil may be diſſolved in ſpirit of wine; or received on a bit of ſugar, and diſſolved by that intermedium in water. The quantity of liquor, which it thus impregnates with its flavour, or the degree of flavour which it communicates to a certain determinate quantity, will be the meaſure of the degree of goodneſs of the oil.

I ſhall here ſubjoin ſome experiments, *of the quantity of eſſential oil obtained from different vegetables*, reduced into the form of a table. The firſt column contains the names of the reſpective vegetable ſubſtances, the ſecond the quantity of each which was ſubmitted to the diſtillation, and the third the quantity of oil obtained. In every other part of this book, where *pound* weights are mentioned, the troy pound of twelve ounces is meant: but theſe experiments having been all made by a pound of ſixteen ounces it was thought expedient to ſet down the matter of fact in the original weights; eſpecially as the ſeveral materials, in the large quantity commonly required for the diſtillation of oils, are purchaſed by weights of the ſame kind. But to remove any ambiguity which might ariſe hence, and enable the reader to judge more readily of the yield, a reduction of the weights is given in the next column; which ſhews the number of parts of each of the ſubjects, from which one part of oil was obtained. To each article is affixed the author's name from whom the experiment is taken: thoſe to which no name is added, are experiments of my own. The different diſtillations of one ſubject, ſeveral of which are inſerted in the table, ſhew how variable the yield of oil is, and that the exotic ſpices, as well as our indigenous plants, do not always contain the ſame proportion of this active principle: though it muſt be obſerved, alſo, that part of the differences may probably ariſe from the operation itſelf having been more or leſs carefully performed.

Table of the quantity of eſſential oil obtained from different vegetables.

		yielded of eſſential oil	ſo that one part of oil was obtained from	
Agallochum wood	10 lb.	4 dra.	320	*Hoff.*
Angelica root	1 lb.	1 dra.	128	*Carth.*
Aniſeed	1 lb.	4 dra.	32	*Neum.*
Aniſeed	3 lb.	1 oun.	48	
Aniſeed	4 lb.	1 oun.	64	
Aſafetida	4 oun.	1 dra.	32	*Neum.*
Calamus aromaticus	50 lb.	2 oun.	185	*Hoff.*
Calamus aromaticus	1 lb.	2 ſcrup.	192	*Neum.*
Caraway ſeeds	4 lb.	2 oun.	32	
Caraway ſeeds	2 lb.	9 dra.	$28\frac{1}{2}$	
Caraway ſeeds	1 cwt.	83 oun.	$21\frac{1}{2}$	
Carline thiſtle root	1 lb.	$2\frac{1}{2}$ ſcrup.	153	*Neum.*
Cardamom ſeeds	1 oun.	1 ſcrup.	24	*Neum.*
Carrot ſeeds	2 lb.	$1\frac{1}{2}$ dra.	171	
Caſcarilla	1 lb.	1 dra.	128	*Carth.*
Camomile flowers	1 lb.	30 gra.	256	*Carth.*
Common camomile flowers	6 lb.	5 dra.	153	
Wild camomile flowers	1 lb.	20 gra.	384	*Carth.*
Wild camomile flowers	6 lb.	$2\frac{1}{2}$ dra.	307	
Chervil leaves, freſh	9 lb.	30 gra.	2304	*Neum.*
Cedar wood	1 lb.	2 dra.	64	*Margg.*
Cinnamon	1 lb.	1 dra.	128	*Sala.*
Cinnamon	1 lb.	$2\frac{1}{2}$ ſcrup.	153	*Neum.*
Cinnamon	4 lb.	6 dra.	$85\frac{1}{3}$	*Lemery*
Cinnamon	1 lb.	2 dra.	64	*Carth.*
Cinnamon	1 lb.	8 ſcrup.	$45\frac{1}{2}$	*Carth.*
Clary ſeeds	4 lb.	2 dra.	256	
Clary in flower, freſh	130 lb.	$3\frac{1}{2}$ oun.	594	
Cloves	1 lb.	$1\frac{1}{2}$ oun.	$10\frac{1}{3}$	*Teichm.*
Cloves	1 lb.	$2\frac{1}{4}$ oun.	$7\frac{1}{9}$	*Carth.*
Cloves	2 lb.	5 oun.	$6\frac{2}{5}$	*Hoff.*
Copaiba balſam	1 lb.	6 oun.	$2\frac{2}{3}$	*Hoff.*
Copaiba balſam	1 lb.	8 oun.	2	

Cummin

Cummin ſeed	1 buſh.	yielded of eſſential oil	21 oun.	ſo that one part of oil was obtained from	256	
Dictamnus Creticus	1 lb.		30 gra.		32	
Dill ſeed	4 lb.		2 oun.		24[illegible]	*Neum.*
Elecampane root	2 lb.		3½ ſcrup.		16	*Neum.*
Elemi	1 lb.		1 oun.		48	*Neum.*
Fennel ſeed, common	2 oun.		1 ſcrup.			
Fennel ſeed, ſweet	1 buſh.		18 oun.			
Galangal root	1 lb.		1 dra.		128	*Carth.*
Garlick root, freſh	2 lb.		30 gra.		256	*Neum.*
Ginger	1 lb.		1 dra.		128	*Neum.*
Horſeradiſh root, freſh	8 oun.		15 gra.		256	*Neum.*
Hyſſop leaves	2 lb.		1½dra.		237	*Neum.*
Hyſſop leaves	1 lb.		½dra.		85	*Carth.*
Hyſſop leaves	1 lb.		2 dra.		64	*Carth.*
Hyſſop leaves, freſh	2 cwt.		6 oun.		597	
Hyſſop leaves, freſh	10 lb.		3 dra.		427	
Hyſſop leaves, freſh	30 lb.		9 dra.		427	
Juniper berries	8 lb.		3 oun.		42⅔	*Hoff.*
Juniper berries	1 lb.		3 dra.		42	*Carth.*
Lavender in flower, freſh	48 lb.		12 oun.		64	
Lavender in flower, freſh	30 lb.		6¾oun.		72	
Lavender in flower, freſh	13½cwt.		60 oun.		403	
Lavender flowers, freſh	2 lb.		4 dra.		64	*Hoff.*
Lavender flowers, dried	4 lb.		2 oun.		32	
Lavender flowers, dried	2 lb.		1 oun.		32	*Hoff.*
Lavender flowers, dried	4 lb.		3 oun.		21⅓	*Hoff.*
Broad-leaved Lavender flowers, dry	4 lb.		1 oun.		64	*Hoff.*
	1 lb.		2 dra.		64	*Carth.*
Lovage root	1 lb.		1 dra.		128	*Carth.*
Mace	1 lb.		5 dra.		25⅗	*Neum.*
Mace	1 lb.		6 dra.		21⅓	*Carth.*
Marjoram in flower, freſh	81 lb.		3¾oun.		347	
Marjoram in flower, freſh	13½lb.		3½dra.		493	
Marjoram in flower, freſh	34 lb.		1½oun.		362	
Marjoram leaves, freſh	18½lb.		4 dra.		592	
Marjoram leaves, dried	4 lb.		1 oun.		64	*Hoff.*
Maſterwort root	1 lb.		30 gra.		256	*Neum.*
Milfoil flowers, dried	14 lb.		4 dra.		448	
Mint in flower, freſh	6 lb.		4½dra.		177	
Mint leaves, dried	4 lb.		1½oun.		42⅔	*Hoff.*
Peppermint, freſh	4 lb.		3 dra.		170⅔	
Myrrh	1 lb.		2 dra.		64	*Hoff.*
Myrrh	1 lb.		3 dra.		42⅔	*Neum.*
Nutmegs	1 lb.		1 oun.		16	*Hoff.*
Nutmegs	1 lb.		1 oun.		16	*Geoff.*
Nutmegs	1 lb.		4 dra.		32	*Neum.*
Nutmegs	1 lb.		6 dra.		21⅓	*Sala*
Nutmegs	1 lb.		5 dra.		25⅔	*Carth.*
Parſley ſeeds	2 lb.		1 dra.		256	
Parſley leaves, freſh	238lb.		2 oun.		1904	
Parſnep ſeeds	8 lb.		2 dra.		512	

Pennyroyal in flower, freſh	13 lb.	yielded of eſſential oil	6 dra.	ſo that one part of oil was obtained from	277	
Black pepper - - -	2 lb.		6 dra.		42⅔	
Black pepper - - -	1 lb.		2½ dra.		82	*Neum.*
Black pepper - - -	1 lb.		4 ſcrup.		96	*Carth.*
Black pepper - - -	1 lb.		1 dra.		128	*Heiſter*
Black pepper - - -	6 lb.		3 dra.		256	*Geoff.*
Pimento - - -	1 oun.		30 gra.		16	*Neum.*
Rhodium wood - - -	1 lb.		3 dra.		42⅔	*Neum.*
Rhodium wood - - -	1 lb.		2 dra.		64	*Sala*
Rhodium wood - - -	1 lb.		3 dra.		42⅔	*Sala*
Rhodium wood - - -	1 lb.		3 dra.		42⅔	*Carth.*
Rhodium wood - - -	1 lb.		4 dra.		132	*Carth.*
Roſemary in flower - -	1 cwt.		8 oun.		224	
Roſemary leaves - -	1 lb.		2 dra.		64	*Sala*
Roſemary leaves - -	1 lb.		3 dra.		42⅔	*Sala*
Roſemary leaves - -	3 lb.		3⅙ dra.		121	*Neum.*
Roſemary leaves - -	1 lb.		1 dra.		128	*Carth.*
Roſemary leaves - -	1 lb.		1½ dra.		82	*Carth.*
Roſemary leaves, freſh - -	70 lb.		5 oun.		224	
Roſes - - - -	100 lb.		4 dra.		3200	*Tachen*
Roſes - - - -	100 lb.		1 oun.		1600	*Homb.*
Roſes - - - -	12 lb.		30 gra.		768	*Hoff.*
Rue - - - -	10 lb.		2 dra.		640	*Hoff.*
Rue - - - -	10 lb.		4 dra.		320	*Hoff.*
Rue in flower - -	4 lb.		1 dra.		512	
Rue in flower - -	60 lb.		2½ oun.		507	
Rue with the ſeeds - -	72 lb.		3 oun.		384	
Saffron - - -	1 lb.		1½ dra.		85⅓	*Vogel*
Sage leaves - - -	1 lb.		5 ſcrup.		77	*Carth.*
Sage in flower, freſh - -	34 lb.		1½ oun.		544	
Sage of virtue in flower -	27 lb.		6 dra.		576	
Sage of virtue in flower -	8 lb.		1½ dra.		681	
Saſſafras - - -	6 lb.		1¾ oun.		55	*Hoff.*
Saſſafras - - -	6 lb.		2 oun.		48	*Neum.*
Savin - - -	2 lb.		5 oun.		6⅔	*Hoff.*
Saunders, yellow - -	1 lb.		2 dra.		64	*Carth.*
Smallage ſeeds - -	1 lb.		2½ ſcrup.		154	*Neum.*
Stechas in flower, freſh	5¾ lb.		2 dra.		368	
Thyme in flower, freſh -	2 cwt.		5½ oun.		652	
Thyme in flower, dry -	3½ lb.		1½ dra.		298	
Lemon thyme in flower, freſh	51 lb.		1¼ oun.		653	
Lemon thyme in flower, freſh	98 lb.		2½ oun.		627	
Lemon thyme, dried a little	104 lb.		3 oun.		555	
Wormwood leaves, dry -	4 lb.		1 oun.		64	
Wormwood leaves, dry -	18 lb.		1½ oun.		192	
Wormwood leaves, dry -	25 lb.		3½ oun.		114	
Zedoary - - -	1 lb.		1 dra.		128	*Neum.*

SECT. II.

Simple diſtilled Waters.

THE effluvia which exhale in the air from many vegetables, particularly from thoſe of the odorous kind, conſiſt apparently of principles of great ſubtility and activity, capable of ſtrongly and ſuddenly affecting the brain and nervous ſyſtem, eſpecially in thoſe whoſe nerves are of great ſenſibility; and likewiſe of operating, in a ſlower manner, upon the ſyſtem of groſſer veſſels. Thus Boerhaave obſerves that in hyſterical and hypochondriacal perſons, the fragrant odour of the Indian hyacinth excites ſtrange ſpaſms, which the ſtrong ſcent of rue relieves: that the effluvia of the walnut-tree occaſion head-achs, and make the body coſtive: that thoſe of poppies procure ſleep: and that the ſmell of bean-bloſſoms, long continued, diſorders the ſenſes. Lemery relates, from his own knowledge, that ſeveral perſons were purged, by ſtaying long in a room where damaſk roſes were drying.

Some of the chemiſts have indulged themſelves in the pleaſing ſurvey of theſe preſiding ſpirits, as they are called, of vegetables; their peculiar nature in the different ſpecies of plants; their exhalation into the atmoſphere by the ſun's heat, and diſperſion by winds; their rendering the air of particular places medicinal, or otherwiſe, according to the nature of the plants that abound. They have contrived alſo different means for collecting theſe fugitive emanations, and concentrating and condenſing them into a liquid form; employing either the native moiſture of the ſubject, or an addition of water, as a vehicle or matrix for retaining them.

THE proceſs which has been judged moſt analagous to that of nature is the following. The ſubject freſh gathered, at the ſeaſon of its greateſt vigour, with the morning dew upon it, is laid lightly and unbruiſed in a ſhallow veſſel, to which is adapted a low head with a recipient. Under the veſſel, a live coal is placed, and occaſionally renewed, ſo as to keep up an uniform heat, no greater than that which obtains in the atmoſphere in ſummer, viz. about 85 degrees of Fahrenheit's thermometer. In this degree of heat, there ariſes, very ſlowly, an inviſible vapour, which condenſes in the head into dewy drops and falls down into the receiver, and which has been ſuppoſed to be the very ſubſtance that the plant would have ſpontaneouſly emitted in the open air.

But on ſubmitting to this proceſs many kinds of odoriferous vegetables, I have always found the liquors obtained by it to be very different from the natural effluvia of the reſpective ſubjects: they had very little ſmell, and no remarkable taſte. It appeared that a heat, equal to that of the atmoſphere, is incapable of raiſing in cloſe veſſels thoſe parts of vegetables which they emit in the open air. It may therefore be preſumed, that in this laſt caſe, ſome other cauſe concurs to the effect: that it is not the ſun's heat alone, which raiſes, and impregnates the air with, the odorous principles of vegetables, but that the air itſelf, or the watery humidity with which it abounds, acting as a true diſſolvent, extracts and imbibes them; ſo that the natural effluvia of a plant may be looked upon as an infuſion of the plant made in air. The purgative virtue of the damaſk roſe, and the aſtringency of the walnut-tree, which, as above obſerved, are in ſome meaſure communicated to the air, may be totally extracted by infuſion both in watery and ſpirituous menſtrua, but never riſe in diſtillation with any degree of heat: and the volatile odours of aromatic herbs, which are diffuſed through the atmoſphere in the loweſt warmth, cannot be made to diſtil without a heat much greater than is ever found to obtain in a ſhaded air.

The above proceſs therefore, and the theory on which it is built, appear to be faulty in two points; (1.) in ſuppoſing that all thoſe principles, which naturally exhale from vegetables, may be collected by diſtillation; whereas there are many which the air extracts in virtue of its diſſolving power, and which are artificially ſeparable alſo by diſſolvents only; (2) in employing a degree of heat inſufficient for ſeparating even thoſe parts which are truly exhalable by heat.

The foregoing method of diſtillation is commonly called *diſtillation by the cold ſtill*; but thoſe, who have practiſed it, have generally employed a conſiderable heat. A ſhallow leaden veſſel is filled with the freſh herbs, flowers, &c. which are heaped above it, ſo that when the head is fitted on, this alſo may be filled a conſiderable way. A little fire is made under the veſſel, ſufficient to make the bottom much hotter than the hand can bear, care being taken only not to heat it ſo far as to endanger ſcorching any part of the ſubject. If the bottom of the veſſel be not made ſo hot as to have this effect on the part contiguous to it, it is not to be feared that the heat communicated to the reſt of the included matter will be great enough to do it any injury. By this management, the volatile parts of ſeveral odorous plants, as mint, are effectually forced over; and if the proceſs have been ſkilfully managed, the diſtilled liquor proves richly impregnated with the native colour and flavour of the ſubject, without having received any kind of diſagreeable impreſſion from the heat made uſe of.

This proceſs has been chiefly practiſed in private families; the ſlowneſs of the diſtillation, and the attendance and care neceſſary for preventing the ſcorching of ſome part of the plant, ſo as to communicate an ungrateful burnt flavour to the liquor, rendering it inconſiſtent with the diſpatch requiſite in the larger way of buſineſs.

Another method has therefore been uſed, that by the common ſtill, called, in diſtinction from the foregoing, the hot ſtill. Here a quantity of water is added to the plant, to prevent its burning: and the liquor is kept nearly of a boiling heat, or made fully to boil, ſo that the vapour riſes plentifully into the head, and paſſing thence into a ſpiral pipe or worm placed in a veſſel of cold water, is there condenſed, and runs out in drops quickly ſucceeding one another, or in a continued ſtream. The additional water does not at all weaken the produce: for the moſt volatile parts of the ſubject riſe firſt, and impregnate the liquor that firſt diſtils: as ſoon as the plant has given over its virtue ſufficiently, which is known by examining from time to time the liquor that runs from the noſe of the worm, the diſtillation is to be ſtopt.

This is the method of diſtillation commonly practiſed for the officinal waters. It is accompanied with one imperfection, affecting chiefly thoſe waters, whoſe principal value conſiſts in the delicacy of their flavour; this being not a little injured by the boiling heat uſually employed, and by the agitation of the odorous particles of the ſubject with the water. Sometimes alſo a part of the plant ſticks to the ſides of the ſtill, and is ſo far ſcorched as to give an ungrateful taint to the liquor.

There is another method of managing this operation, which I have already recommended for the diſtillation of the more volatile eſſential oils, and which is equally applicable to that of the waters. In this method, the advantages of the foregoing ones are united, and their inconveniencies obviated. A quantity of water being poured into the ſtill, and the herbs or flowers placed in a baſket over it, there can be no poſſibility of burning; the water may be made to boil, but ſo as not to riſe up into the baſket, which would defeat the intention of this contrivance. The hot vapour of the water paſſing lightly through all the interſtices of the ſubject, imbibes and carries over the volatile parts unaltered in their native flavour. By theſe means the diſtilled waters of all thoſe ſubſtances, whoſe oils are of the more volatile kind, are obtained in the utmoſt perfection, and with ſufficient diſpatch; for which laſt intention the ſtill may be filled quite up to the head.

In the diſtillation of eſſential oils, the water, as obſerved in the foregoing ſection, imbibes always a part of the oil. The diſtilled liquors, here treated of, are no other than water thus impregnated with the eſſential oil of the ſubject; whatever ſmell, taſte, or virtue, is here communicated to water, or obtained in the form of a watery liquor, being found in a concentrated ſtate in the oil. The eſſential oil, or ſome part of it, more attenuated and ſubtilized than the reſt, is the direct principle, on which the title of *ſpiritus rector*, or preſiding ſpirit, has been beſtowed.

All thoſe vegetables therefore which contain an eſſential oil, will give over ſome virtue to water by diſtillation: but the degree of the impregnation of the water, or the quantity of water which a plant is capable of ſatiating with its virtue, are by no means in proportion to the quantity of its oil. The oil ſatiates only the water that comes over at the ſame time with it. If there be more oil than is ſufficient for this ſatiation, the ſurplus ſeparates, and concretes in its proper form, not miſcible with the water that ariſes afterwards. Some odoriferous flowers, whoſe oil is in ſo little quantity, that ſcarcely any viſible mark of it appears, unleſs fifty or an hundred pounds or more are diſtilled at once, give nevertheleſs as ſtrong an impregnation to water, as thoſe plants which abound moſt with oil.

Many have been of opinion, that diſtilled waters may be more and more impregnated with the virtues of the ſubject, and their ſtrength increaſed to any aſſigned degree, by *cohobation*, that is, by re-diſtilling them a number of times from freſh parcels of the plant. Experience, however, ſhews the contrary; a water ſkilfully drawn in the firſt diſtillation, proves on every repeated one, not ſtronger, but more diſagreeable.

agreeable. Aqueous liquors are not capable of imbibing above a certain quantity of the volatile oil of vegetables, and this they may be made to take up by one, as well as by any number of diſtillations. The oftener the proceſs is repeated, the ungrateful impreſſion, which they generally receive from the fire even at the firſt time, becomes greater and greater. Thoſe plants which do not yield at firſt waters ſufficiently ſtrong, are not proper ſubjects for this proceſs, ſince their virtue may be obtained much more advantageouſly by others.

General rules for the diſtillation of the officinal ſimple waters.

I.

Plants and their parts ought to be freſh gathered [*E.*]

Where they are directed freſh, ſuch only muſt be employed; but ſome are allowed to be uſed dry, as being eaſily procurable in this ſtate at all times of the year, though rather more elegant waters might be obtained from them whilſt green [*L.*]

II.

Having bruiſed the ſubject a little, pour thereon thrice its quantity of ſpring water. This quantity is to be diminiſhed or increaſed, according as the plants are more or leſs juicy than ordinary [*E.*]

When freſh and juicy herbs are to be diſtilled, thrice their weight of water will be fully ſufficient: but dry ones require a much larger quantity. In general, there ſhould be ſo much water, that after all intended to be diſtilled has come over, there may be liquor enough left to prevent the matter from burning to the ſtill.

III.

The diſtillation may be performed in an alembic with a refrigeratory, the junctures being luted [*E.*]

IV.

The diſtillation is to be continued as long as the water which comes over is perceived to have any ſmell or taſte of the plant [*E.*]

Plants differ ſo much, according to the ſoil and ſeaſon of which they are the produce, and likewiſe according to their own age, that it is impoſſible to fix the quantity of water to be drawn from a certain weight of them, to any invariable ſtandard. The diſtillation may always be continued as long as the liquor runs well flavoured of the ſubject, and no longer.

If the herbs be of prime goodneſs, they muſt be taken in the weights preſcribed. But when freſh ones are ſubſtituted to dry, or when the plants themſelves are the produce of unfavourable ſeaſons, and weaker than ordinary, the quantities are to be varied according to the diſcretion of the artiſt [*L.*]

After the odorous water, alone intended for uſe, has come over, an acidulous liquor ariſes, which has ſometimes extracted ſo much from the copper head of the ſtill, as to prove emetic. To this are owing the anthelmintic virtues attributed to certain diſtilled waters.

V.

In the preceding edition of the Edinburgh Pharmacopœia, ſome vegetables were ordered to be ſlightly fermented with the addition of yeaſt, previouſly to the diſtillation.

The principle, on which this management is founded, is certainly juſt; for the fermentation ſomewhat opens and unlocks their texture, ſo as to make them part with more in the ſubſequent diſtillation than could be drawn over from them without ſome aſſiſtance of this kind. Thoſe plants, however, which require this treatment, are not proper ſubjects for ſimple waters to be drawn from; their virtues being obtainable to better advantage by other proceſſes.

VI.

If any drops of oil ſwim on the ſurface of the water, they are to be carefully taken off [*E.*]

VII.

That the waters may keep the better, about one-twentieth part of their weight of proof ſpirit may be added to each, after they are diſtilled [*L.*]

A great number of diſtilled waters was formerly kept in the ſhops, and are ſtill retained in foreign pharmacopœias. The faculty of Paris direct, in a late edition of their *codex medicamentarius*, no leſs than one hundred and twenty-five different waters, and one hundred and thirty different ingredients in one ſingle water. Near one half of theſe preparations have ſcarcely any virtue or flavour from the ſubject, and many of the others are inſignificant.

The colleges of London and Edinburgh have rejected theſe oſtentatious ſuperfluities; and given an elegant and compendious ſet of waters, ſufficient for anſwering ſuch purpoſes as theſe kinds of preparations are applied to in practice. Diſtilled waters are employed chiefly as grateful diluents, as ſuitable vehicles for medicines of greater efficacy, or for rendering diſguſtful ones more acceptable to the palate and ſtomach: few are depended on, in any intentions of conſequence, by themſelves.

AQUA ALEXETERIA SIMPLEX.

Simple alexeterial water.

Lond.

Take of

Spearmint leaves, freſh, a pound and a half;

Sea wormwood tops, freſh,

Angelica leaves, freſh, each one pound;

Water, as much as is ſufficient to prevent an empyreuma.

Draw off by diſtillation three gallons.

Edinb.

Take of

Elder flowers, moderately dried, two pounds;

Angelica leaves, freſh gathered, one pound;

Water, a ſufficient quantity.

Diſtil off three gallons.

These waters are ſufficiently elegant with regard to taſte and ſmell; though few expect from them ſuch virtues as their title ſeems to imply. They are uſed occaſionally for vehicles of alexipharmic medicines, or in juleps to be drunk after them, as coinciding with the intention; but in general are not ſuppoſed to be themſelves of any conſiderable efficacy.

AQUA SEMINUM ANETHI.

Dill-ſeed water.

Lond.

Take of

Dill-ſeeds, a pound and a half;

Water, as much as is ſufficient to prevent an empyreuma.

Draw off by diſtillation one gallon.

This water, which turns out pretty ſtrong of the dill-ſeeds, is ſometimes employed as the baſis of carminative juleps. It is ſimilar in flavour to a water drawn from caraway ſeeds, but leſs agreeable.

AQUA ANGELICÆ.

Angelica water.

Take of
- Angelica leaves, freſh, any quantity;
- Water, three times as much.

Diſtil as long as the liquor runs well flavoured of the plant.

THIS water is among us very rarely made uſe of. It ſmells and taſtes conſiderably of the angelica, but does not prove ſo agreeable as might be expected.

AQUA CORTICUM AURANTIORUM SIMPLEX.

Simple orange peel water.

Lond.

Take of
- Yellow peel of Seville oranges, dried, four ounces;
- Water, as much as is ſufficient to prevent burning.

Diſtil off one gallon.

THIS water proves very weak of the orange-peel. It is deſigned for a diluter, in fevers, and other diſorders where the ſtomach and palate are ſubject to receive quick diſguſt; in which caſes (as the committee obſerve) cordial waters, eſpecially if their uſe be to be long continued, ought to be but lightly impregnated with any flavour, however agreeable.

AQUA CARDUI BENEDICTI.

Carduus water.

This is prepared from the leaves of carduus benedictus, after the ſame manner as directed in the Vth general rule, p. 174.

THIS water has been looked upon as a ſudorific and alexipharmic; and in this intention is ſtill frequently preſcribed by foreign phyſicians, in juleps and draughts. Among us, it has been long diſuſed, and held entirely inſignificant; this plant, however opened by fermentation, giving nothing valuable over the helm. The decoction which remains after the diſtillation, duly depurated and inſpiſſated, proves a medicine of ſome uſe: it is a moderately ſtrong bitter, ſimilar to the extract of carduus; ſee chap. vi. In keeping, a conſiderable quantity of eſſential ſalt ſometimes ſhoots in it.

AQUA CASTOREI.

Caſtor water.

Lond.

Take of
- Ruſſia caſtor, one ounce;
- Water, as much as will prevent burning.

Draw off two pints.

CASTOR yields almoſt all its flavour in diſtillation to water; but treated in the ſame manner with ſpirit of wine, gives over nothing. The ſpirit of caſtor, formerly kept in the ſhops, had none of the ſmell or virtues of the drug; whilſt the water here directed proves, when freſh drawn, very ſtrong of it.

It is remarkable, that the virtues of this animal ſubſtance reſide in a volatile oil, analogous to the eſſential oils of vegetables. Some are reported to have obtained, in diſtilling large quantities of the drug, a ſmall portion of oil, which ſmelt extremely ſtrong of the caſtor, and diffuſed its ungrateful ſcent to a great diſtance.

This water is made uſe of in hyſteric caſes, and ſome nervous complaints, though it has not been found to anſwer what many people expect from it. It loſes much of its flavour in keeping.

AQUA CERASORUM NIGRORUM.

Black cherry water.

Let any quantity of black cherries be bruiſed, ſo as that the ſtones may be broken, and then diſtilled according to art, with only a ſmall proportion of water.

THIS is a very grateful water, and has long maintained a place in the ſhops. It has frequently been employed by phyſicians as a vehicle, in preference to the other diſtilled waters: and among nurſes, and others who have the care of young children, has been the firſt remedy againſt the convulſive diſorders to which children are ſo often ſubject.

This water has nevertheleſs of late been brought into diſrepute, and by ſome looked upon as poiſonous. They obſerve, that it receives its flavour principally from the cherry ſtones; and that theſe kernels, like many others, bear a reſemblance in taſte to the leaves of the lauro-ceraſus, which have been diſcovered to yield, by infuſion or diſtillation, the moſt ſudden poiſon known. Some phyſicians of Worceſter have found, by trial purpoſely made, that a diſtilled water very ſtrongly impregnated with the flavour of the cherry kernels (no more than two pints being diſtilled from fourteen pounds of the cherry ſtones) proved in like manner poiſonous to brutes: the committee of the London college repeated the ſame experiment, and found the effects agreeable to thoſe gentlemen's report.

It by no means follows from theſe trials, nor after ſuch long experience can it be imagined, that black cherry water, when no ſtronger than the ſhops have been accuſtomed to prepare it, is unſafe. Theſe kernels, as the committee obſerve, plainly reſemble opium, and ſome other things, which poiſon only when taken in too great a quantity; the water from the very laurel leaves is harmleſs when duly diluted; and even ſpirit of wine proves a poiſon of a kind not greatly different, if drunk to a certain degree of exceſs. Nor can it be concluded, from the trials with the ſtrong black cherry water on dogs, &c. that even this will have the ſame effects in the human body; the kernels of many ſorts of fruits being in ſubſtance poiſonous to brutes, though innocent to man.

It is poſſible, however, that this water in any degree of ſtrength may not be altogether ſafe to the tender age of infants, where the principles of life are but juſt beginning as it were to move; it is poſſible, that it may there have had pernicious effects, without being ſuſpected; the ſymptoms it would produce, if it ſhould prove hurtful, being ſuch as children are often thrown into from the diſeaſe which it is imagined to relieve. On theſe conſiderations, both the London and Edinburgh colleges have choſen to lay it aſide; more eſpecially as it has been too often counterfeited with a water diſtilled from bitter almonds, which are known to communicate a poiſonous quality.

AQUA CINNAMOMI SIMPLEX.

Simple cinnamon water.

Lond.

Take of
  Cinnamon, one pound;
  Water, as much as will prevent burning.
Diſtil off one gallon.

AQUA CINNAMOMI SINE VINO.

Cinnamon water without wine.

Edinb.

Take of
  Cinnamon, one pound:

Water, a gallon and a half.
Steep them together for two days; and then diſtil off the water, till it ceaſes to run milky.

This is a very grateful and uſeful water, poſſeſſing in an eminent degree the fragrance and aromatic cordial virtues of the ſpice. Great care ſhould be had, in the choice of the cinnamon, to avoid the too common impoſition of ſubſtituting caſia in its room. This latter yields a water much leſs agreeable than that of cinnamon, and whoſe flavour is manifeſtly empyreumatic. The two drugs may be eaſily diſtinguiſhed from one another by the marks laid down under the reſpective articles in the ſecond part of this work.

The virtues of all theſe waters depend upon their containing a portion of the oil of the ſubject. The oil of cinnamon is very ponderous, and ariſes more difficultly than that of any of the other vegetable matters from which ſimple waters are ordered to be drawn. This obſervation directs us, in the diſtillation of this water, to make uſe of a quick fire and a low veſſel. For the ſame reaſon, the water does not keep ſo well as might be wiſhed; the ponderous oil, parting from it in time, and falling to the bottom, when the liquor loſes its milky hue, its fragrant ſmell, and aromatic taſte. Some recommend a ſmall proportion of ſugar to be added, in order to keep the oil united with the water.

AQUA CHAMÆMELI.
Chamomile water.
Edinb.

Take any quantity of chamomile flowers, and ſo much water as will prevent burning. Diſtil off the water ſo long as it proves ſufficiently ſtrong of the flavour of the flowers.

Chamomile flowers were ordered in former editions to be fermented previouſly to the diſtillation, a treatment of which they ſtand little in need; for they give over, without any fermentation, as much as that proceſs is capable of enabling them to do. In either caſe, the ſmell and peculiar flavour of the flowers ariſe, without any thing of the bitterneſs; this remaining behind in the decoction: which, if duly depurated and inſpiſſated, yields an extract ſimilar to that prepared from the flowers in the common manner. The diſtilled water has been uſed in flatulent colics, and the like, but is at preſent held in no great eſteem.

AQUA FŒNICULI.
Fennel water.
Lond.

Take of
Sweet fennel ſeeds, one pound;
Water, as much as is ſufficient to prevent an empyreuma.
Diſtil off one gallon.

Edinb.

Take of
Fennel leaves, freſh, any quantity;
Water, three times as much.
Diſtil as long as the water runs well flavoured.

The firſt of theſe waters is a ſufficiently grateful one, and the other is not unpleaſant. The leaves ſhould be taken before the plant has run into flower; for after this time, they are much weaker and leſs agreeable. Some have obſerved, that the upper leaves and tops, before the flowers appear, yield a more elegant water, and a remarkably finer eſſential oil, than the lower ones; and that the oil obtained from the one ſwims on water, whilſt that of the other ſinks. No part of the herb, however, is equal in flavour to the ſeeds.

AQUA HYSSOPI.

Hyſſop water.

Edinb.

This is diſtilled from the freſh leaves of hyſſop, after the ſame manner as the water of fennel leaves.

Hyssop water has been held by ſome in conſiderable eſteem, as an uterine and a pectoral medicine. It was directed in a late edition of the Edinburgh pharmacopœia, for making up the black pectoral troches, but is now exchanged for common water. Few at preſent expect any ſingular virtues from it, nor is it often made uſe of, or met with in the ſhops.

AQUA MELISSÆ.

Balm water.

Edinb.

This is prepared by diſtilling the green leaves of balm, as in the foregoing proceſs.

In former editions of the Edinburgh pharmacopœia, this water was ordered to be cohobated, or rediſtilled from freſh quantities of the herb. This management ſeems to have been taken from Boerhaave, who has a very high opinion of the water thus prepared. He ſays, he has experienced, in himſelf, extraordinary effects from it, taken on an empty ſtomach; that it has ſcarce its equal in hypochondriacal and hyſterical caſes, the chloroſis, and palpitation of the heart, as often as theſe diſeaſes proceed from a diſorder of the ſpirits rather than from any collection of morbific matter.

For my own part, I have already given my opinion with regard to the cohobation of theſe liquors; and ſhall here only obſerve, that, whatever virtues are lodged in balm, they may be much more perfectly and advantageouſly extracted by cold infuſion in aqueous or ſpirituous menſtrua: in this proceſs, the liquor ſuffers no injury from being returned on freſh parcels of the herb; a few repetitions will load it with the virtues of the ſubject, and render it very rich. The impregnation here is almoſt unlimited; but in diſtilled waters, it is far otherwiſe.

AQUA MENTHÆ.

Mint water.

Edinb.

Take of

Spearmint leaves, freſh, any quantity;

Water, three times as much.

Diſtil as long as the liquor which comes over has any taſte or ſmell of the mint.

AQUA MENTHÆ VULGARIS SIMPLEX.

Simple ſpearmint water.

Lond.

Take of

Spearmint leaves, dried, a pound and a half;

Water, as much as is ſufficient to prevent burning.

Draw off by diſtillation one gallon.

These waters ſmell and taſte very ſtrong of the mint; and prove, in many caſes, uſeful ſtomachics. Boerhaave commends them (cohobated) as a preſent and incomparable remedy, for ſtrengthening a weak ſtomach, and curing vomiting proceeding from cold viſcous phlegm; as alſo in lienteries.

AQUA MENTHÆ PIPERITIDIS SIMPLEX.

Simple pepper mint water.
L. E.

Take of
Peppermint leaves, dry, a pound and a half;
Water, as much as will prevent an empyreuma.
Draw off by diſtillation one gallon.

This is a very elegant and uſeful water. It has a warm, pungent taſte, exactly reſembling that of the pepper-mint itſelf. A ſpoonful or two, taken at a time, warm the ſtomach, and give great relief in cold, flatulent colics. Some have ſubſtituted a plain infuſion of the dried leaves of the plant, which is not greatly different in virtue from the diſtilled water.

Aqua petroselini.

Parſley water.

This is diſtilled from the freſh leaves of parſley, after the ſame manner as the *aqua menthæ.*

This water is ſcarce ever called for, or kept in the ſhops. Parſley yields little virtue in diſtillation; and the leaves are not the part that yield moſt. The ſeeds give a conſiderable ſhare of flavour, which is not diſagreeable.

AQUA PIPERIS JAMAICENSIS.

Water of Jamaica pepper.
Lond.

Take of
Jamaica pepper, half a pound;
Water, as much as will prevent burning.
Diſtil off one gallon.

This diſtilled water is a very elegant one, and has come pretty much into uſe. The hoſpitals employ it as a ſuccedaneum to the more coſtly ſpice waters. It is, however, inferior in gratefulneſs to the ſpiritous water of the ſame ſpice hereafter directed.

AQUA PULEGII SIMPLEX.

Simple penny-royal water.
Lond.

Take of
Penny-royal leaves, dry, a pound and an half;
Water, as much as will prevent burning.
Draw off by diſtillation one gallon.

AQUA PULEGII.

Water of penny-royal.
Edinb.

Take of
Penny-royal leaves, freſh, any quantity;
Water, three times as much.
Diſtil as long as the water comes off well flavoured of the herb.

These waters poſſeſs, in a conſiderable degree, the ſmell, taſte, and virtues of the penny-royal. They are frequently taken in hyſteric caſes, and not without good effects.

AQUA ROSARUM DAMASCENARUM.

Damaſk roſe water.
Lond.

Take of
Damaſk roſes, freſh gathered, ſix pounds;
Water, as much as will keep them from burning.
Diſtil off a gallon of the water.

Edinb.

Take three parts of water to one of the freſh roſes; and diſtil as long as the water which comes over has any ſmell of the flowers.

This water is principally valued on account of its fine flavour, which approaches to that generally admired in the roſe itſelf. The purgative virtue of the roſes remains entire in the liquor left in the ſtill, which has therefore been generally employed for making the ſolutive honey and ſyrup, inſtead of a decoction or infuſion of freſh roſes prepared on purpoſe : and this piece of frugality the college have now admitted. A diſtilled water of red roſes has been ſometimes called for in the ſhops : and ſupplied by that of damaſk roſes, diluted with common water. This is a very venial ſubſtitution ; for the water drawn from the red roſe has no quality which that of the damaſk does not poſſeſs in a far ſuperior degree ; neither the purgative virtue of the one, nor the aſtringency of the other, ariſing in diſtillation.

AQUA RUTÆ.

Rue water.

This is to be diſtilled from the freſh leaves of rue, and cohobated on freſh parcels of them, after the ſame manner as the *aqua meliſſæ.*

RUE gives over in this proceſs the whole of its ſmell, and great part of its pungency. The diſtilled water ſtands recommended in epileptic caſes, the hyſteric paſſion, for promoting perſpiration, and other natural ſecretions.

AQUA SABINÆ.

Savin water.

This is diſtilled from the freſh leaves of ſavin, after the ſame manner as *aqua angelica.*

THIS water is by ſome held in conſiderable eſteem for the ſame purpoſes as the diſtilled oil of ſavin. Boerhaave relates, that he has found it (when prepared by cohobation) to give an almoſt incredible motion to the whole nervous ſyſtem, and that, when properly uſed, it proves eminently ſerviceable for promoting the menſes and the hæmorrhoidal flux.

AQUA SAMBUCI.

Elder-flower Water.

This is diſtilled from freſh elder-flowers, after the ſame manner as the *aqua angelicæ.*

THIS water ſmells conſiderably of the flowers ; but is rarely made uſe of.

SECT. III.

Spirituous diſtilled waters and ſpirits.

THE flavour and virtues of diſtilled waters are owing, as obſerved in the preceding ſection, to their being impregnated with a portion of the eſſential oil of the ſubject from which they are drawn. Spirit of wine, conſidered as a vehicle for theſe oils, has this advantage above water, that it is their proper menſtruum, and keeps all the oil, that riſes with it, perfectly diſſolved into an uniform limpid liquor.

Nevertheleſs, many ſubſtances, which, on being diſtilled with water, impart to it their virtues in great perfection; if treated in the ſame manner with ſpirit of wine, ſcarce give over to it any ſmell or taſte. This difference proceeds hence : that ſpirit is not ſuſceptible of ſo great a degree of heat as water. Liquids in general, when made to boil, have received as great a heat as they are capable of ſuſtaining :

taining: now, if the extent of heat between freezing and boiling water, as meaſured by thermometers, be taken for a ſtandard, ſpirit of wine will be found to boil with leſs than four-fifths of that heat, or above one-fifth leſs than the heat of boiling water. It is obvious therefore, that ſubſtances may be volatile enough to riſe with the heat of boiling water, but not with that of boiling ſpirit.

Thus if cinnamon, for inſtance, be committed to diſtillation with a mixture of ſpirit of wine and water, or with a pure proof ſpirit, which is no other than a mixture of about equal parts of the two: the ſpirit will ariſe firſt, clear, colourleſs, and tranſparent, and almoſt without any taſte of the ſpice; but as ſoon as the more ponderous watery fluid begins to ariſe, the oil comes freely over with it, ſo as to render the liquor highly odorous, ſapid, and of a milky hue.

The proof ſpirits uſually met with in the ſhops are accompanied with a degree of ill flavour; which, though concealed by means of certain additions, plainly diſcovers itſelf in diſtillation. This nauſeous reliſh does not begin to ariſe, till after the purer ſpirituous part has come over; which is the very time that the virtues of the ingredients begin, alſo, moſt plentifully to diſtil: and hence the liquor receives an ungrateful taint. To this cauſe principally is owing the general complaint, that the cordials of the apothecary are leſs agreeable than thoſe of the ſame kind prepared by the diſtiller; the latter being extremely curious in rectifying or purifying the ſpirits (when deſigned for what he calls fine goods) from all ill flavour.

SPIRITUS VINI RECTIFICATUS.

Rectified ſpirit of wine. *Edinb.*

Take any quantity of French brandy, and with a very gentle heat diſtil it to one half.

This rectified ſpirit, being digeſted for two days with one-fourth its quantity of dry ſalt of tartar in powder, and then diſtilled in a glaſs cucurbit, with a very gentle heat, becomes ALCOHOL.

Spirits diſtilled from malt liquors, or other fermented ſubſtances, after being rectified in the above method, require further purification; namely, repeated diſtillation from an equal quantity of ſpring water.

French brandy is rather too dear an article in this country, for diſtillation; nor is the ſpirit obtained from it any ways preferable to one procurable from cheaper liquors. The coarſer inflammable ſpirits may be rendered perfectly pure, and fit for the niceſt purpoſes, by the following method.

If the ſpirit be exceedingly foul, mix it with about an equal quantity of water, and diſtil with a ſlow fire; diſcontinuing the operation as ſoon as the liquor begins to run milky, and diſcovers, by its nauſeous taſte, that the impure and phlegmatic part is ariſing. By this treatment, the ſpirit leaves a conſiderable portion of its foul oily matter behind it in the water, which now appears milky and turbid, and proves highly diſagreeable in taſte. If the ſpirit was not very foul at firſt, this ablution is not neceſſary; if extremely ſo, it will be needful to repeat it once, twice, or oftener.

As vinous ſpirits ariſe with a leſs degree of fire than watery liquors, we are hence directed to employ, in the diſtillation of them, a heat leſs than that in which water boils: and if due regard be had to this circumſtance, very weak ſpirits may, by one or two wary diſtillations, be tolerably well freed from their aqueous phlegm; eſpecially if the diſtilling veſſels be of ſuch a height, that the ſpirit, by the heat of a water-bath, may but juſt paſs over them. In ſuch caſe, the phlegmatic vapours which ariſe for a little way along with the ſpirit, will condenſe and fall back again before they can come to the head. Very pompous inſtruments have been contrived for this purpoſe, and carried in a ſpiral or ſerpentine form to an extraordinary height. The ſpirit, aſcending through theſe, was to leave all the watery parts it contained, in its paſſage, and come over perfectly pure and free from phelgm. But theſe inſtruments are built upon erroneous principles, their extravagant height defeating the end it was deſigned to anſwer. If the liquor be made to boil, a conſiderable quantity of mere phlegm will come over along with the ſpirit; and if the heat be not raiſed to this pitch, neither phlegm nor ſpirit will diſtil. The moſt convenient inſtrument is the common ſtill, betwixt the body of which, and its head, an adopter or copper tube may be fixed.

The ſpirit being waſhed, as above directed, from its foul oil, and freed from the greateſt part of the phlegm, by gentle diſtillation in a water bath; add to every gallon of it, a pound or two of pure, dry, fixt alkaline ſalt. Upon digeſting theſe togther for a little time, the alkali, from its known property of attracting water and oils, will imbibe the remaining phlegm, and ſuch part of the diſagreeable unctuous matter as may ſtill be left in the ſpirit, and ſink with them to the bottom of the veſſel. If the ſpirit be now again gently drawn over, it will ariſe entirely free from its phlegm and nauſeous flavour; but ſome particles of the alkaline ſalt are apt to be carried up with it, and give what the workmen call an urinous reliſh. This may be prevented by adding, previouſly to the laſt diſtillation, a ſmall proportion of calcined vitriol, alum, or ſal catharticus amarus; the acid of theſe ſalts will unite with, and neutralize the alkali, and effectually prevent it from ariſing; while no more of the acid of the ſalts is extricated than what the alkali abſorbs.

The ſpirit obtained by theſe means is extremely pure, limpid, perfectly flavourleſs, and fit for the fineſt purpoſes. It may be reduced to the ſtrength commonly underſtood by proof, by mixing twenty ounces of it (by weight) with ſeventeen ounces of water. The diſtilled cordials made with theſe ſpirits, prove much more elegant and agreeable, than when the common rectified or proof ſpirits of the ſhops are made uſe of.

If the rectified ſpirit be diſtilled afreſh from dry alkaline ſalt, with a quick fire, it brings over a conſiderable quantity of the ſalt, and in this ſtate is ſuppoſed to be a more powerful menſtruum, for certain ſubſtances, than the pure ſpirit. This alkalized ſpirit is called TARTARIZED SPIRIT OF WINE.

The general virtues of vinous ſpirits have been already mentioned in the preceding part. The ſpirits impregnated with the volatile oils of vegetables, to be treated of in this chapter, have joined to thoſe, the aromatic, cordial or other virtues which reſide in the oils.

ARTICLE I. *Diſtilled ſpirits.*

AQUA MELISSÆ COMPOSITA.
Compound balm-water, commonly called Eau de carmes.

Take of
- Balm in flower, freſh gathered and cleared from the ſtalks, two pounds;
- Lemon-peel, freſh, as ſoon as pared from the fruit, four ounces;
- Coriander ſeeds, eight ounces;
- Nutmegs,
- Cloves,
- Cinnamon, each, bruiſed, two ounces;
- Angelica roots, dried and bruiſed, one ounce;
- Spirit of wine, highly rectified, ten pints.

Steep the ſeveral ingredients in the ſpirit, four or five days; and then draw off, in the heat of a water-bath, ten pints. Rectify the diſtilled liquor by a ſecond diſtillation in a water-bath, drawing off only about eight pints and three quarters.

THIS proceſs is taken from the *Elemens de pharmacie* of M. Beaumé, who obſerves, that all the aromatic ſpirits ought to be prepared in the ſame manner: When the common ſpirits of this kind are rubbed on the hands, &c. they leave, after the more volatile parts have exhaled, a diſagreeable empyreumatic ſmell; and when diluted with water, and taken medicinally, they leave in like manner a nauſeous flavour in the mouth. To remedy theſe imperfections, he made many experiments, which ſhewed, that in order to obtain theſe liquors of the deſirable qualities, the ſpirit muſt not only be perfectly pure at firſt, but that the liquor ought alſo to be rectified after it has been diſtilled from the ſubjects. In this rectification, only the more volatile, ſubtile, and aromatic parts of the ingredients ariſe. There remains behind a white liquor, acrid, bitter, loaded only with the groſſer oil, and deprived of all the ſpecific flavour of the ſubjects. Indeed the very imperfection complained of, naturally points out this ſecond diſtillation for the remedy; as it ſhews the ſpirit to contain a grateful and ungrateful matter, the former of which exhales, while the other is left behind. The author ſays, that when the *aqua meliſſæ* is prepared as above directed, it has ſomething in it more perfect than any of the odoriferous ſpirits whoſe excellence is cried up, and which have the reputation of being the beſt.

Aromatic ſpirituous waters have in general leſs ſmell, when newly diſtilled, than after they have been kept about ſix months. M. Beaumé ſuſpects that the preparations of this kind, which have been moſt in vogue, were ſuch as had been thus improved by keeping; and found that the good effects of age might be produced in a ſhort time by means of cold. He plunges quart bottles of the liquor into a mixture of pounded ice and ſea ſalt. The ſpirit after having ſuffered, for ſix or eight hours, the cold hence reſulting, proves as grateful as that which has been kept for ſeveral years. Simple waters alſo, after being frozen, prove far more agreeable than they were before, though they are always leſs ſo than thoſe, which have been drawn with ſpirit, and expoſed to a like degree of cold. This melioration of diſtilled waters by froſt was taken notice of by Geoffroy, *Hiſt. Acad.* 1713.

SPIRITUS

SPIRITUS RORISMARINI.

Spirit of roſemary.

Lond.

Take of

Roſemary tops, freſh gathered, a pound and a half;

Proof ſpirit, one gallon.

Diſtil in the heat of a water-bath, till five pints are come over.

SPIRITUS RORISMARINI, vulgo AQUA REGINÆ HUNGARIÆ.

Hungary water [*E.*]

Take of

Roſemary flowers, juſt gathered, two pounds;

Rectified ſpirit of wine, eight pounds.

Put them together, and immediately diſtil in a water-bath.

It is generally brought to us from abroad.

This ſpirit is very fragrant, inſomuch as to be in common uſe as a perfume. That brought from abroad is ſuperior in fragrance to ſuch as is generally made among us. In order to prepare it in perfection, the vinous ſpirit ſhould be extremely pure; the roſemary tops gathered when the flowers are full blown upon them, and committed immediately to diſtillation, particular care being taken not to bruiſe or preſs them. The beſt method of managing the diſtillation, is that formerly recommended for the diſtillation of the more volatile eſſential oils and ſimple waters, viz. firſt to place the ſpirit in the ſtill, and then ſet in, above the liquor, either an iron hoop, with a hair cloth ſtretched over it, upon which the flowers are to be lightly ſpread, or rather a baſket, ſupported on three pins, reaching down to the bottom. A gentle heat being applied, juſt ſufficient to raiſe the ſpirit, its vapour, lightly percolating through the flowers, will imbibe their finer parts, without making that diſagreeable alteration, which liquors applied to ſuch tender ſubjects, in their groſſer form, generally do. Probably the ſuperiority of the French Hungary water, to that prepared among us, is owing to ſome ſkilful management of this kind, or to that recommended for the foregoing preparation, and employing a perfectly pure ſpirit.

In the Wirtemberg pharmacopœia, ſome ſage and ginger are added, in the proportion of half a pound of the former, and two ounces of the latter, to four pounds of the roſemary.

SPIRITUS LAVENDULÆ SIMPLEX.

Simple ſpirit of lavender.

Lond.

Take of

Lavender flowers, freſh gathered, a pound and a half;

Proof ſpirit, one gallon.

Draw off, by the heat of a water-bath, five pints.

The ſame cautions are to be obſerved here, as in the diſtillation of the foregoing ſpirit. Both of them, when made in perfection, are very grateful and fragrant: they are frequently rubbed on the temples, &c. under the notion of refreſhing and comforting the nerves; and likewiſe taken internally, to the quantity of a tea-ſpoonful, as warm cordials.

SPIRITUS LAVENDULÆ COMPOSITUS.

Compound ſpirit of lavender.

Lond.

Take of

Simple ſpirit of lavender, three pints;

Spirit of roſemary, one pint;

Cinnamon,

Nutmegs, each half an ounce;

Red ſaunders, three drams.
Digeſt them together, and then ſtrain out the ſpirit for uſe.

The compound ſpirit of lavender of a former London pharmacopœia is as follows.

Take of
Lavender flowers, one gallon;
Sage flowers,
Roſemary flowers,
Betony flowers, each one handful;
Borage flowers,
Bugloſs flowers,
Lilies of the valley,
Cowſlips, each two handfuls;
Balm leaves,
Feverfew leaves,
Orange tree leaves,
Orange flowers,
Stæchas flowers,
Bay berries, each one ounce;
French brandy, four gallons.

Pour the brandy on the other ingredients freſh gathered, and, after ſuitable digeſtion, draw off in a water-bath two gallons and a half. To this ſpirit add the following ingredients:
Citron peel,
Yellow ſaunders, each ſix drams;
Cinnamon,
Nutmegs,
Mace,
Leſſer cardamom ſeeds,
Cubebs, each half an ounce;
Aloes wood, one dram.

Digeſt theſe together for twenty-four hours; then filter the ſpirit, and ſuſpend in it the following ingredients (where they are judged proper) tied up in a thin linen cloth; viz. of
Muſk,
Ambergris,
Saffron, each half a ſcruple;
Red roſes dried,
Red ſaunders, each half an ounce.

In a former edition of the Edinburgh pharmacopœia, this ſpirit is thus directed.

Take of the diſtilled oils of
Lavender, an ounce and a half;
Roſemary, an ounce;
Marjoram, ſix drams;
Lemon-peel, half an ounce;
Nutmegs, three drams;
Cloves, two drams;
Cinnamon, one dram.

Gradually drop theſe oils into three gallons of French brandy, occaſionally ſtirring them together. Diſtil the mixture in balneo mariæ to two-thirds; and in the ſpirit which comes over, ſuſpend the following ingredients, tied up in a linen cloth; viz. of
Red ſaunders, two ounces;
Engliſh ſaffron,
Cochineal, each half an ounce;

To which if you would have the ſpirit perfumed, add of
Ambergris, two ſcruples;
Muſk, one ſcruple.

In the preſent pharmacopœia of Edinburgh, this medicine ſtands as follows.

Take of
The ſimple ſpirit of lavender, three pounds;
Spirit of roſemary, one pound;
Cinnamon, one ounce;
Cloves, two drams;
Nutmeg, half an ounce;
Red ſaunders, three drams.

Macerate for ſeven days, and ſtrain off the ſpirit.

The red ſaunders is of no further uſe in theſe compoſitions, than as a colouring ingredient. If a yellow ſpirit were liked, the yellow ſaunders would be an excellent article, as it not only communicates a fine colour, but likewiſe a conſiderable ſhare of medicinal virtue. A ſpirit diſtilled from the flowers of lavender and ſage, in due proportion, and digeſted in the cold for a little time with ſome cinnamon, nutmegs, and yellow ſaunders, proves a very elegant and grateful one. Where eſſential oils are employed, as in the third of the above proceſſes, particular care muſt be had in the choice of them; for on their goodneſs that of the medicine depends. The digeſtion of the ſpirit with the ſpices, &c. ſhould be performed without heat, otherwiſe the flavour of the medicine will be injured.

All theſe ſpirits are grateful reviving cordials. The firſt, though conſiderably the moſt ſimple, is not inferior in elegancy to either of the others. This medicine has long been held in great eſteem, under the name of PALSY DROPS, in all kinds of languors, weakneſs of the nerves, and decays of age; for which reaſon, we have given the different forms of preparing it that have been followed for ſome time paſt. It may be conveniently taken upon ſugar, from ten to eighty, or a hundred drops.

AQUA ODORIFERA.

An odoriferous ſpirit, called ſweet honey water.

Take of

Coriander ſeeds,
Honey, each one pound;
Cloves, an ounce and a half;
Nutmegs,
Benzoine,
Storax, each an ounce;
Vanelloes, in number four;
Yellow rind of three lemons;
French brandy, one gallon.

Digeſt theſe ingredients together for forty-eight hours; and then diſtil off the ſpirit in balneo mariæ. To one gallon of this ſpirit, add

Orange flower water,
Roſe water, of each one pound and a half;
Ambergris,
Muſk, of each five grains.

Firſt grind the muſk and ambergris with ſome of the water, and afterwards put all together, in a large matraſs: ſhake them well, and let them circulate for three days and nights in a gentle heat; then ſuffer them to cool, filter the liquor, and keep it cloſe ſtopt up for uſe.

Another.

Take of

Coriander ſeeds, one pound;
Lemon peel, freſh,
Nutmegs, each four ounces;
Ambergris,
Muſk, each five grains;
Clean melaſſes ſpirit, two gallons.

Bruiſe the nutmegs and coriander ſeeds, and put them, with the lemon peel and the ſpirit, into a ſmall ſtill placed in balneo mariæ: tie a thin cloth over the mouth, and ſprinkle thereon the ambergris and muſk, reduced into fine powder; lute on the head, let the whole ſtand in digeſtion for twelve hours, and then diſtil as much as a boiling heat of the bath can force over.

To this add, of

Roſe water, one pint;
Orange flower water, half a pint.

THESE compoſitions are deſigned rather as perfumes than as medicines; though, for ſuch as can bear their fragrance, they might be uſed to advantage. The muſk and ambergris do not communicate ſo much of their ſmell as might be expected; and ſerve chiefly to heighten the flavour of the other ingredients; which theſe perfumes excellently do, when employed in very ſmall proportion, to all the odoriferous ſimples, without imparting any thing perceptible of their own. Both the foregoing ſpirits are very agreeable; a few drops of either give a fine flavour to a large quantity of other liquor. Mr. Wilſon, from whom the firſt is taken (*Pract. Chem.* pag 354) tells us, that he often made it for king James II. and that it gives one of the moſt pleaſant ſcents that can be ſmelt. The other is formed on the ſame plan, by omitting ſuch articles as appeared ſuperfluous.

SPIRITUS COCHLEARIÆ.
Spirit of ſcurvygraſs.
Edinb.

Take of
- Freſh ſcurvygraſs, bruiſed, ten pounds;
- Rectified ſpirit of wine, five pints.

Steep the herb in the ſpirit for twelve hours; then, with the heat of a water-bath, diſtil off five pints.

This ſpirit is very ſtrong of the ſcurvygraſs, and may be given in thoſe caſes where the uſe of this herb is proper, from twenty to one hundred drops. The virtues of ſcurvygraſs reſide in a very ſubtile, volatile oil, which ariſes in diſtillation both with water and pure ſpirit; and if the liquors be expoſed to the air, ſoon exhales from both. The ſpirit, newly diſtilled, is extremely pungent, but if long kept, even in cloſe veſſels, becomes remarkably leſs ſo.

The makers of this ſpirit have frequently added to the ſcurvygraſs a quantity of horſeradiſh root, and ſometimes ſubſtituted for it one drawn entirely from the horſeradiſh: the flavour of theſe two ſimples being ſo much alike, that their diſtilled ſpirits are ſcarce diſtinguiſhable from one another. Here it may be obſerved, that though *arum* and *dracunculus* are uſually ranked in the ſame claſs with the two foregoing vegetables, and looked upon as ſimilar to them; this proceſs diſcovers a remarkable difference: whilſt the former yield all their pungency in diſtillation both to water and ſpirit, the latter give over nothing to either, and yet their virtues are deſtroyed in the operation.

SPIRITUS COCHLEARIÆ AUREUS.
Golden, or purging ſpirit of ſcurvygraſs.

Take of
- Spirit of ſcurvygraſs, one pound.
- Gamboge, one ounce.

Diſſolve the gamboge in the ſpirit, and if any ſediment fall to the bottom, carefully decant the tinged liquor from it.

This ſpirit is otherwiſe made with ſcammony, or reſin of jalap, inſtead of gamboge.

This has been in great eſteem among the common people, and ſtrongly recommended by the venders, in all kinds of ſcorbutic diſorders. It is nevertheleſs a very indifferent medicine, and little deſerves the pompous title given it. It may be taken from twenty to ſixty drops, either upon ſugar or mixed with ſyrup.

AQUA ANHALTINA.
Anhalt water.

Take of
- Turpentine, ſix ounces;
- Olibanum, one ounce;
- Aloes wood, three ounces;
- Cloves,
- Cinnamon,
- Cubebs,
- Roſemary flowers,
- Galangal,
- Maſtich,
- Nutmegs, each ſix drams;
- Saffron, two drams and a half;
- Bay berries,
- Fennel ſeeds, each half an ounce;
- Spirit of wine, five pints.

Pulverize thoſe ingredients which

require ſuch treatment, and digeſt the whole with the ſpirit for ſix days; then diſtil with an exceedingly gentle heat, in balneo mariæ: the liquor which runs clear is to be ſeparated from the turbid, and kept by itſelf.

Where the addition of muſk is required, fifteen grains thereof are to be tied in a bag, and ſuſpended in the head of the ſtill.

We have inſerted this compoſition from the Brandenburgh pharmacopœia, on account of its being held, in ſome places, in great eſteem. It is rubbed on weak or paralytic limbs, againſt catarrhs, old pains and aches, &c. and likewiſe given internally, in doſes of half an ounce, for ſtrengthening the ſtomach, diſcuſſing flatulencies, relieving colicky pains, and promoting the uterine purgations. It is very unpleaſant to the palate; the aromatics, though ſufficiently numerous, and in conſiderable quantity, not giving over near enough to cover the ſtrong flavour of the turpentine; there are not many of them, indeed, that give over any thing conſiderable at all. A more elegant ſpirit of this kind might be prepared from turpentine, roſemary, lavender and ſage flowers; or by diſtilling the ſpirit firſt from the turpentine alone, and then diſſolving in it a proper quantity of any ſuitable eſſential oils.

Article II. *Diſtilled Spirituous Waters.*

By *diſtilled ſpirits* are underſtood ſuch as are drawn with a ſpirit that has been previouſly rectified, or which is reduced nearly to that ſtrength in the operation; by *ſpirituous waters*, thoſe in which the ſpirit is only of the proof ſtrength, or contains an admixture of about an equal meaſure of water. Theſe laſt have been uſually called compound waters, even when diſtilled from one ingredient only; as thoſe, on the other hand, which are drawn by common water, though from a number of ingredients, are named ſimple; the title *ſimplex*, here, relating not to ſimplicity in reſpect of compoſition, but to the vehicle's being *plain* water. The Edinburgh pharmacopœia denominates thoſe waters ſimple which are drawn from a ſingle ingredient, whether the vehicle be common water, or ſpirituous water, and all thoſe compounds which are diſtilled from more than one.

General rules for the diſtillation of ſpirituous waters; from the Edinburgh Pharmacopœia.

I.

The plants and their parts ought to be moderately and newly dried, except ſuch as are ordered to be freſh gathered.

II.

After the ingredients have been ſteeped in the ſpirit for the time preſcribed, add as much water as will be ſufficient to prevent an empyreuma, or rather more.

III.

The liquor which comes over firſt in the diſtillation, is by ſome kept by itſelf, under the title of ſpirit; and the other runnings, which prove milky, fined down by art. But it is better to mix all the runnings together, without fining them, that the waters may poſſeſs the virtues of the plant entire; which is a circumſtance to be more regarded than their fineneſs or ſightlineſs.

If the diſtillation be ſkilfully managed, the heat equable, and all along gentle, and no more drawn off than the quantity directed, moſt of the waters will appear ſufficiently bright and fine: ſome of them, which look turbid juſt after they are drawn, will, on ſtanding for a few days, become clear and tranſparent. The practice here forbidden, of ſaving ſome of the firſt runnings apart, is certainly very injurious to the compoſition; the water being not only robbed by it of ſome of the more volatile parts of the ingredients, but likewiſe rendered permanently milky, as wanting the ſpirit which, by diſſolving the oil of the ingredients that gives this appearance, would make the liquor tranſparent. Nor is the method of fining the turbid waters by alum, &c. leſs culpable; for theſe additions produce their effects only by ſeparating from the liquor what it had before gained from the ingredients.

IV.

In the diſtillation of theſe waters, the genuine brandy obtained from wine is directed. Where this is not to be had, take inſtead of that proof ſpirit, half its quantity of a well-rectified ſpirit prepared from any other fermented liquors. In this ſteep the ingredients, and then add ſpring water enough, both to make up the quantity ordered to be drawn off, and to prevent burning.

By this method more elegant waters may be obtained, than when any of the common proof ſpirits, even that of wine itſelf, are made uſe of. All vinous ſpirits receive ſome flavour from the matter from which they are extracted; and of this flavour, which adheres chiefly to the phlegm or watery part, they cannot be diveſted without ſeparating the phlegm, and reducing them to a rectified ſtate.

AQUA ABSINTHII COMPOSITA.

Compound wormwood water.

Take of
- Calamus aromaticus,
- Orange peel, freſh,
- Cinnamon, each four ounces;
- Roman wormwood, half a pound;
- Mint, three ounces;
- Leſſer cardamoms,
- Mace, each one ounce;
- French brandy, two gallons.

Having bruiſed the ſeeds and ſpices, and cut the other ingredients, pour on them the brandy, and after ſteeping them together for the ſpace of four days, diſtil off two gallons.

THIS water was formerly preſcribed as a ſtomachic, along with bitter infuſions; and for this purpoſe it is the leaſt unfit (as being the moſt elegant and leaſt unpleaſant) of all the wormwood waters with which the ſhops were furniſhed. It is nevertheleſs too ungrateful an addition to the fine bitters of our new pharmacopœias; and cannot be ſuppoſed to contribute any thing to their virtue, which more agreeable ſpirituous waters would not equally do. Some have expected wormwood water to be itſelf a bitter; but only the ſmell and flavour of the wormwood ariſe in this proceſs, thoſe parts in which its bitterneſs reſides remaining behind in the ſtill.

In former editions of the London pharmacopœia there were two wormwood waters, which by ſome are ſtill held in eſteem, and were propoſed by the committee of the college to be continued at a late reviſal, with ſome amendments.

AQUA ABSINTHII MINUS COMPOSITA.

Wormwood water leſs compounded.

Take of
- Common wormwood leaves, dried, two pounds;
- Leſſer cardamom ſeeds, two ounces;
- Coriander ſeeds, half a pound;
- French brandy, four gallons.

Let them ſteep together for ſome time, and then diſtil off four gallons.

AQUA ABSINTHII MAGIS COMPOSITA.

Wormwood water more compounded.

Take of
- Sea wormwood,
- Common wormwood, each dried, one pound;
- Sage,
- Mint,
- Balm, each dried, two handfuls;
- Galangal,
- Ginger,
- Calamus aromaticus,
- Elecampane roots,
- Sweet fennel ſeeds,
- Coriander ſeeds, each three drams;
- Cinnamon,
- Cloves,
- Nutmegs, each two drams;
- Leſſer cardamom ſeeds,
- Cubebs, each one dram;
- French brandy, twelve pints.

Having cut or bruiſed the ingredients, which require that treatment, ſteep them for ſome time in the brandy, and afterwards draw off by diſtillation twelve pints.

AQUA ALEXETERIA SPIRITUOSA.

Spirituous alexeterial water.

Lond.

Take of
- Spearmint leaves, freſh, half a pound;
- Angelica leaves, freſh,
- Sea wormwood tops, freſh, each four ounces;
- Proof ſpirit, one gallon;
- Water, as much as will prevent burning.

Diſtil off one gallon.

THIS is a tolerably pleaſant water. It is looked upon as an alexipharmac and ſtomachic, and in theſe intentions is not unfrequently made uſe of in juleps, &c.

AQUA ALEXETERIA SPIRITUOSA cum ACETO.

Spirituous alexeterial water with vinegar.

Lond.

Take of
- Spearmint leaves,
- Angelica leaves, each half a pound;
- Sea wormwood tops, four ounces;
- Proof ſpirit, one gallon;
- Water, as much as is ſufficient to prevent burning.
- Vinegar, one pint.

Diſtil the freſh herbs with the ſpirit and water, drawing off one gallon; to which add the vinegar.

ANGELICA, after trial of ſundry other materials, has been found the moſt effectually to remove the diſagreeable flavour which the vinegar would otherwiſe communicate, and therefore this plant is ordered in a larger proportion here than in the other alexeterial waters. Perhaps it would be more eligible to add the vinegar occaſionally; for when mixed with the liquor at firſt, it is apt to throw down, upon keeping, ſome of the more valuable parts which the water received from the herbs.

This water is given in the room of the AQUA THERIACALIS, or *treacle*

treacle water, a medicine of ſome importance, which in a former Edinburgh pharmacopœia is thus directed.

Take of
  Butterbur roots, one pound;
  Angelica roots,
  Maſterwort roots, each half a pound;
  Zedoary, four ounces;
  Scordium leaves,
  Rue leaves, each ſix ounces;
  Theriaca, one pound;
  French brandy, three gallons;
  Diſtilled vinegar, half a gallon.
Let the roots, leaves, and theriaca be ſteeped in the ſpirit for four days; then diſtil off two gallons and a half; to which add the diſtilled vinegar.

This water is ordered not to be drawn ſo low as the other diſtilled waters, and with great judgment; for the addition of the vinegar conſiderably weakens it, and if drawn low, renders it very unſightly. It is left to the choice of the operator, to employ either Andromachus's or the Edinburgh treacle. The latter is the better of the two, but neither of them are proper ſubjects for diſtillation; for beſides that three parts in four are honey, which yields nothing, they contain ſeveral other ingredients that afford as little.

The Aqua theriacalis of a former London pharmacopœia is as follows.

Take of
  Juice of green walnuts, four pints;
    Rue, three pints;
    Carduus,
    Balm, each two pints;
  Butterbur roots, freſh, a pound and a half;
  Burdock roots, freſh, one pound;
  Angelica roots,
  Maſterwort roots, freſh, each half a pound
  Scordium, freſh, four handfuls;
  Venice treacle, and
  Mithridate, kept for ſome time, each eight ounces;
  Lemon juice, two pints;
  French brandy, a gallon and a half.
Draw off by diſtillation three gallons and a half, then add half a gallon of diſtilled vinegar.

The predominant flavour of this water is from the rue and angelica; the reſt contribute only to render the whole more offenſive. What qualities it can receive from the numerous ingredients of the all-powerful theriaca may be eſtimated by this, that the whole ſpecies of that electary, employed in half an ounce of the water, its uſual doſe, amounts not to a ſingle grain; the mithridate, with which our pharmacopœia, by the advice of Sir Theodore Mayerne, had the honour of enriching the compoſition, being alſo juſt of the ſame importance.

The college of Edinburgh has given the following amendment of this water, under the title of

AQUA EPIDEMIA.
Plague water.
Edinb.

Take of
  Maſterwort roots, a pound and a half;
  Angelica ſeed,
  Elder flowers, each half a pound;
  French brandy, three gallons.
Digeſt for two days, then diſtil off two gallons and a half; to which add half a gallon of diſtilled vinegar.

The foregoing compoſitions are the only diſtilled waters in which the heat of the ſpirit is tempered by the addition of vinegar, an ingredient which renders them ſerviceable in many caſes where ſpirituous liquors alone would be improper. The treacle water has long been held in great eſteem as a ſudorific and alexipharmac; and thoſe which the London and Edinburgh colleges have now directed in the room of it, though far more ſimple and elegant, are not inferior in efficacy.

AQUA SEMINUM ANISI COMPOSITA.

Compound aniſeed water.

Lond.

Take of
Aniſeeds,
Angelica ſeeds, each half a pound;
Proof ſpirit, one gallon;
Water, as much as is ſufficient to prevent burning.
Draw off by diſtillation one gallon.

THIS is a very elegant aniſeed water, the angelica ſeeds greatly improving the flavour of the aniſe. It is apt to turn out milky, if drawn ſo low as here ordered.

AQUA CORTICUM AURANTIORUM SPIRITUOSA.

Spirituous orange peel water.

Lond.

Take of
Outer rind of Seville orange peel, dried, half a pound;
Proof ſpirit, one gallon;
Water, as much as is ſufficient to prevent an empyreuma.
Diſtil off one gallon.

THIS is conſiderably ſtronger of the orange peel than the ſimple water. It is uſed as a cordial, ſtomachic, and carminative.

AQUA BRYONIÆ COMPOSITA.

Compound bryony water.

Take of
Bryony roots, one pound;
Wild valerian root, four ounces;
Pennyroyal,
Rue, each half a pound;
Mugwort leaves,
Feverfew flowers,
Savin tops, each one ounce;
Orange peel, freſh,
Lovage ſeed, each two ounces;
French brandy, two gallons and a half.
Having cut or bruiſed thoſe ingredients which require ſuch treatment, ſteep them in the brandy four days; then draw off by diſtillation two gallons and a half of liquor.

THIS compoſition, deſigned as an antihyſteric, is liable to conſiderable objections, not only in regard to its particular ingredients, but to the medicinal intention of the whole. Many, by the uſe of this and ſimilar waters, under the notion of medicines, have been betrayed into the pernicious habit of drinking drams: whereas, however ſpirituous liquors may give a temporary relief to the languors of hyſterical and hypochondriacal perſons, none ſuffer ſo ſoon the ill effects attending the conſtant uſe of them. The unpleaſant flavour of this water renders it exceptionable alſo as a vehicle of other antihyſteric medicines, which in general are of themſelves ſufficiently ungrateful. A ſmall augmentation in the doſe of the medicines themſelves (as the London committee obſerve) would abundantly compenſate any aſſiſtance to be expected from this water, and leave room for the uſe of a more agreeable vehicle.

The college of London has therefore wholly omitted this water, without giving any thing of ſimilar intention in its place. That of Edinburgh ſtill retains it, but has improved the compoſition, and rendered it more ſimple, by the rejection of the more exceptionable ingredients. The bryony root, from which the water receives its name, is the moſt exceptionable of them all. This being therefore now omitted, the water is diſtinguiſhed by the name of another of its ingredients, and is directed as follows.

AQUA VALERIANÆ COMPOSITA.

Compound valerian water.
Edinb.

Take of
Wild valerian root, a pound and a half;
Lovage ſeed, half a pound;
Pennyroyal leaves, four ounces;
Savin tops, two ounces;
French brandy, two gallons.
Digeſt for two days, and then draw off by diſtillation two gallons.

AQUA SEMINUM CARDAMOMI.

Cardamom ſeed water.
Lond.

Take of
Leſſer cardamom ſeeds, freed from the huſks, four ounces;
Proof ſpirit, one gallon;
Water, as much as is ſufficient to prevent burning.
Diſtil off one gallon.

This water is a grateful cordial and carminative, the cardamom ſeeds giving over in this proceſs the whole of their flavour. It is not perhaps very neceſſary to be at the trouble of ſeparating the huſks, for theſe communicate nothing diſagreeable. The only difference is, that if employed unhuſked, a proportionably larger quantity of them muſt be taken.

AQUA SEMINUM CARUI.

Caraway water.
Lond.

Take of
Caraway ſeeds, half a pound;
Proof ſpirit, one gallon;
Water, as much as will prevent burning.
Diſtil off one gallon.

This is a cordial in common uſe. It contains the flavour of the caraway ſeeds in perfection.

AQUA CINNAMOMI SPIRITUOSA.

Spirituous cinnamon water.
Lond.

Take of
Cinnamon, a pound;
Proof ſpirit, a gallon;
Water, ſo much as will prevent burning.
Draw off by diſtillation one gallon.

AQUA CINNAMOMI CUM VINO.

Cinnamon water with wine.
Edinb.

Take of
Cinnamon, one pound;
French brandy, one gallon.
Let them ſteep together for two days, and then diſtil off one gallon.

This is a very agreeable and uſeful cordial water, but not ſo ſtrong of the cinnamon as might be expected; for very little of the virtues of the ſpice ariſes till after the pure ſpirituous part has diſtilled. Hence, in former editions of the London pharmacopœia, the diſtillation was ordered to be protracted till two pints more, than here directed, were come over. By theſe means the whole virtue of the cinnamon was more frugally than judiciouſly obtained, for the diſagreeable flavour of the feints of proof ſpirits, and the acidulous liquor ariſing from cinnamon as well as other vegetables, when their diſtillation is long continued, gave an ill reliſh to the whole; at the ſame time that the oil which was extracted from the ſpice, was by this acid thrown down.

In the pharmacopœia reformata, it is propoſed to make this water, by mixing the *aqua cinnamoni ſimplex* with ſomewhat leſs than an equal quantity of rectified ſpirit. On ſhaking them together, the liquor loſes its milky hue, ſoon becomes clear, and more elegant than the water diſtilled as above. It is equally ſtrong of the cinnamon, and free from the nauſeous taint with which the common proof ſpirits are impregnated.

AQUA JUNIPERI COMPOSITA.

Compound juniper water.
Lond.

Take of
- Juniper berries, one pound;
- Sweet fennel ſeeds,
- Caraway ſeeds, each an ounce and a half;
- Proof ſpirit, one gallon;
- Water, as much as is ſufficient to prevent burning.

Diſtil off one gallon.

This water, mixed with about an equal quantity of the rob of juniper berries, proves an uſeful medicine in catarrhs, debility of the ſtomach and inteſtines, and difficulty of urine: The water by itſelf is a good cordial and carminative. The ſervice which this and other ſpirituous waters do in theſe intentions, is too commonly known; though the ill conſequences that follow their conſtant uſe, be too little regarded.

AQUA MENTHÆ PIPERITIDIS SPIRITUOSA.

Spirituous peppermint water.
Lond.

Take of
- Pepper-mint leaves, dry, a pound and a half;
- Proof ſpirit, a gallon;
- Water, as much as is ſufficient to prevent an empyreuma.

Draw off by diſtillation one gallon.

This water is made uſe of in flatulent colics and ſimilar diſorders; in which it oftentimes gives immediate relief. It ſmells and taſtes ſtrongly of the peppermint.

AQUA MENTHÆ, VULGARIS SPIRITUOSA.

Spirituous ſpearmint water.
Lond.

Take of
- Spearmint leaves, dry, a pound and a half;
- Proof ſpirit, a gallon;
- Water, as much as will prevent burning.

Diſtil off one gallon.

This water, if the ſpirit be good, turns out a very elegant one, and preferable, in weakneſs of the ſtomach, reaching to vomit, and the like, to many more elaborate preparations. Where the diſorder is not accompanied with heat or inflammation, half an ounce of this water may be given diluted with ſome agreeable aqueous liquor.

Aqua mirabilis.

Take of
- Cinnamon, two ounces;
- Lemon peel, one ounce;
- Angelica ſeeds,
- Leſſer cardamom ſeeds,
- Mace, each half an ounce;
- Cubebs, two drams;
- Balm leaves, ſix ounces;
- French brandy, one gallon.

Pour the brandy on the other ingredients bruiſed; and after digeſting them for four days, draw off by diſtillation one gallon.

The above compoſition of this celebrated water is that which was formerly followed. At a late reformation

formation it has received a conſiderable improvement; the cardamoms, cubebs, and balm, are omitted, and an addition of pepper-mint introduced. The formula at preſent is as follows.

AQUA AROMATICA, vulgo MIRABILIS.

Aromatic water, commonly called aqua mirabilis.
Edinb.

Take of
Cinnamon, two ounces;
Freſh yellow rind of lemons,
Angelica ſeeds, each one ounce;
Mace, half an ounce;
Pepper-mint, three ounces;
French brandy, one gallon.
Digeſt for two days, and then diſtil off one gallon.

This water is very rich of the ſpices; and proves a pleaſant, warm cordial and carminative. In thoſe who have not, by frequent uſe, deprived themſelves of the benefit of theſe kinds of liquors, it often gives preſent relief in languors, flatulencies, colicky pains, and ſimilar complaints.

The ſpices in theſe two compoſitions being rather too dear for the purpoſes of a common cordial water, the wholeſale dealers, as I have been informed, generally ſubſtitute for them a cheaper ſpice from our own plantations, Jamaica pepper. A very elegant water is prepared alſo from that ſpice by itſelf, in the following proportions.

AQUA PIPERIS JAMAICENSIS SPIRITUOSA.

Spirituous Jamaica pepper water.

Take of
Jamaica pepper, half a pound;
Proof ſpirit, three gallons;
Water, a ſufficient quantity to prevent an empyreuma.
Draw off by diſtillation three gallons.

This water is far more agreeable than a ſimple water drawn from the ſame ſpice; and has long had a place among the cordials both of the diſtiller and apothecary; though it has not yet been received into any public pharmacopœia.

AQUA NUCIS MOSCHATÆ.

Nutmeg water.
Lond.

Take of
Nutmegs, two ounces;
Proof ſpirit, a gallon;
Water, as much as will prevent burning.
Draw off by diſtillation one gallon.

This water (with the addition only of ſome hawthorn flowers, an article of very little ſignificance) was formerly celebrated in nephritic diſorders, under the name of AQUA NEPHRITICA. At preſent, it is regarded only as an agreeable ſpirituous liquor, lightly impregnated with the nutmeg flavour.

AQUA POEONIÆ COMPOSITA.

Compound peony water.

Take of
Peony roots, two ounces;
Wild valerian roots, an ounce and a half;
White dittany root, one ounce;
Peony ſeeds, ſix drams;
Lilies of the valley, freſh, four ounces;
Lavender flowers,
Roſemary flowers, each two ounces;
Betony,
Marjoram,
Rue,
Sage, tops of each, one ounce;
French brandy, a gallon and a half.
Cut or bruiſe thoſe materials that require ſuch treatment, ſteep them four days in the brandy, and

and then diſtil over a gallon and a half of liquor.

This water was formerly diſtinguiſhed by the title of Aqua antiepileptica; and recommended in all kinds of epilepſies and nervous complaints. For ſome time paſt, it has had little regard paid to it, having rarely been preſcribed any otherwiſe than as a vehicle, and as ſuch not often. The ingredients from which it receives its name, the peony roots and ſeeds, communicate little or nothing to the water; whatever virtues theſe are poſſeſſed of, remain behind in the decoction; nor are theſe the only exceptionable articles; the dittany, betony, and ſome others, though of the aromatic kind, afford ſo little, as not to deſerve a place among more powerful materials.

The above formula is taken from a former edition of the Edinburgh pharmacopœia. It is here inſerted for the ſake of thoſe who may ſtill have ſome regard for forms ſo long received; and for the ſame reaſon, the peony water of a late London pharmacopœia is alſo ſubjoined. The committee endeavoured to amend it at a late reformation, by retaining only thoſe ingredients to which a ſtar is affixed.

Take of
- Lilies of the valley *, freſh gathered, one pound;
- Lime flowers *, half a pound;
- Peony flowers *, four ounces;
- Male peony root *, two ounces and a half;
- White dittany root,
- Long birthwort, each half an ounce;
- Miſletoe of the oak,
- Rue *, each two handfuls;
- Peony ſeeds, huſked, ten drams;
- Rue ſeeds, three drams and a half;
- Ruſſia caſtor,
- Cubebs *,
- Mace *, each two drams;
- Cinnamon *, an ounce and a half;
- Roſemary flowers, ſix pugils;
- Stæchas flowers,
- Lavendar flowers, each four pugils;
- Betony flowers,
- Clove-july-flowers,
- Cowſlips, each eight pugils;
- Juice of black cherries, four pints;
- French brandy *, two gallons and a half.

After proper maceration, diſtil off four gallons.

AQUA PULEGII SPIRITUOSA.

Spirituous penny-royal water.

Lond.

Take of
- Penny-royal leaves, dry, a pound and a half;
- Proof ſpirit, a gallon;
- Water, as much as will prevent burning.

Diſtil off one gallon.

This water has a good ſhare of the flavour of the penny-royal, and is pretty much in uſe as a carminative and antihyſteric.

AQUA RAPHANI COMPOSITA.

Compound horſeradiſh water.

Lond.

Take of
- Garden ſcurvygraſs leaves, freſh, four pounds;
- Horſeradiſh root, freſh,
- Orange peel, freſh, each two pounds;
- Nutmegs, nine ounces;
- Proof ſpirit, two gallons;
- Water, ſufficient quantity to prevent burning.

Draw off by diſtillation two gallons.

Edinb.

Take of
- Horſeradiſh root,

Garden ſcurvygraſs, freſh, each three pounds;
Orange peel, freſh,
Juniper berries,
Canella alba, each four ounces;
French brandy, three gallons.

Steep the juniper berries and canella alba in the ſpirit, for two days; then add the other ingredients, and draw off three gallons.

Both theſe waters are very elegant ones, and as well adapted for the purpoſes of an antiſcorbutic, as any thing that can well be contrived in this form. The committee of the London college obſerve, with regard to the firſt, that the horſeradiſh and ſcurvygraſs join very well together, giving a ſimilar flavour, though not a little diſagreeable; that the nutmeg ſuppreſſes this flavour very ſucceſsfully, without ſuperadding any of its own; and to this, orange peel (no incongruous ingredient to the intention of the medicine) adds a flavour very agreeable. Arum root has generally had a place in this water, but is here deſervedly thrown out; for it gives nothing of its pungency over the helm, notwithſtanding what is aſſerted, by ſome diſpenſatory-writers, to the contrary. Muſtard ſeed, though not hitherto, that I know, employed in theſe kinds of compoſitions, ſeems to be an excellent ingredient. It gives over the whole of its pungency, and is likewiſe leſs periſhable than moſt of the other ſubſtances of this claſs. This ſeed wants no addition, unleſs ſome aromatic material to furniſh an agreeable flavour.

Aqua vulneraria, ſeu Aqua catapultarum.

Arquebuſade water.
Pharm. Argent.

Take of
Comfrey, leaves and roots,
Sage,
Mugwort,
Bugloſs, each four handfuls;
Betony,
Sanicle,
Ox-eye daiſy,
Common daiſy,
Greater figwort,
Plantane,
Agrimony,
Vervain,
Wormwood,
Fennel, each two handfuls;
St. John's wort,
Long birthwort,
Orpine,
Veronica,
Leſſer centaury,
Milfoil,
Tobacco,
Mouſe-ear,
Mint,
Hyſſop, each one handful;
Wine, twenty-four pounds.

Having cut and bruiſed the herbs, pour on them the wine, and let them ſtand together in digeſtion, in horſedung, or any other equivalent heat, for three days. Afterwards diſtil in an alembic with a moderate fire.

This celebrated water has been for ſome time held in great eſteem, in contuſions, for reſolving coagulated blood, diſcuſſing the tumours that ariſe on fractures and diſlocations, for preventing the progreſs of gangrenes, and cleanſing and healing ulcers and wounds, particularly gun-ſhot wounds. Mr. Lemery has been at the pains of writing a whole treatiſe on it; in which he conſiders each of the ingredients ſingly, and ſuppoſes the water to poſſeſs their united virtues. In this, however, he miſtakes; for the virtues of moſt of the herbs, admitting them to be as great as he would have them, reſide in ſuch parts as are not capable of being elevated in this proceſs.

CHAPTER VI.

Concentration of the medicinal parts of juices and infuſions by evaporation.

WHEN vegetable juices, or watery or ſpirituous decoctions or infuſions, are expoſed to a continued heat; the fluid gradually evaporating, carries off with it ſuch volatile matters as it was impregnated with, and leaves the more fixed united together into one maſs. As the object of the preceding chapter was the collection of the volatile principle which exhales along with the fluid, that of the preſent is this re-union and concentration of the fixt matter. The maſs which remains from the evaporation of the expreſſed juice of a plant, is called an *inſpiſſated juice*; from watery decoctions or infuſions, an *extract*; from ſpirituous tinctures, a *reſin*, or *eſſential extract*. The term *extract* is frequently uſed alſo as a general appellation of all the three kinds. Inſpiſſated juices and watery decoctions, particularly the former, when evaporated no further than to the conſiſtence of oil or honey, are called *rob* or *ſapa*; and ſpirituous tinctures, reduced to a like conſiſtence, are called *balſam*.

SECT. I.

Inſpiſſated juices.

WHAT relates to the expreſſion of juices, has already been delivered in chap. ii. with the moſt effectual means of preſerving them in their liquid ſtate, and a general account of what ſubſtances do, or do not, give out their virtues with their juices. In the inſpiſſation of juices, there is further to be conſidered the volatility or fixity of their medicinal parts. If a plant loſe its virtue, or part of its virtue, in being dried, it is obvious that the juice muſt loſe as much in being inſpiſſated to dryneſs; how gentle ſoever the heat be, with which the inſpiſſation is performed. It is likewiſe to be obſerved, that the medicinal parts of ſome juices are kept in a ſtate of perfect ſolution by the watery fluid, ſo as to be completely retained by it after the liquor has been made fine by ſettling, ſtraining, or other means; while the medicinal parts of others, not diſſoluble by watery menſtrua, are only diffuſed through the liquor in the ſame manner as the feculencies are, and ſeparate along with theſe on ſtanding.

ROB BACCARUM SAMBUCI.

Rob of elder-berries.

Lond.

Let the depurated juice of elder-berries be inſpiſſated with a gentle heat.

Edinb.

Take two quarts of the juice of ripe elder-berries, and half a pound of white ſugar. Evaporate over a gentle fire, or in a water-bath, to the conſiſtence of honey.

This preparation, made with or without ſugar, keeps well, and proves a medicine of conſiderable importance, as an aperient, generally promoting the natural excretions by ſtool, urine or ſweat. The doſe is, from a dram or two, to an ounce or more. A ſpoonful, diluted with water, is uſefully taken, in common colds, at bed-time.

SUCCUS PRUNORUM SILVESTRIUM, ſive ACACIA GERMANICA.

Inſpiſſated juice of ſloes, or German acacia.

Edinb.

Let any quantity of the juice of unripe ſloes be inſpiſſated over a gentle fire.

This juice is inſpiſſated nearly to dryneſs, care being taken to prevent its burning, as directed in the following ſection for making extracts with water. It is a moderately ſtrong aſtringent, ſimilar to the Egyptian acacia, for which it has been commonly ſubſtituted in the ſhops. (See page 73.) It is given, in fluxes and other diſorders where ſtyptic medicines are indicated, from a ſcruple to a dram.

EXTRACTUM PLANTAGINIS.

Extract of plantane.

Edinb.

Let any quantity of the juice of plantane leaves be depurated; either by ſuffering it to ſettle, and then decanting off the clear liquor; or by ſtraining; or clarification with whites of eggs. Afterwards evaporate the juice in a ſand-heat, to the conſiſtence of honey.

After the ſame manner, extracts may be made from all acid, cooling, ſtyptic, juicy plants.

This is a method of treating plants very little practiſed, but which promiſes, if duly proſecuted, to afford medicines of conſiderable power. There are many common and neglected herbs, as plantane, chickweed, chervil, &c. whoſe juices in their dilute ſtate, as well as the herbs in ſubſtance, ſeem to be altogether inſignificant, but which, when the juice is well depurated from the feculent matter, and concentrated by the evaporation of the fluid, yield extracts, which diſcover to the taſte no ſmall activity. Theſe extracts, like thoſe prepared from the juices of moſt of the ſummer fruits, if inſpiſſated to dryneſs, grow moiſt again in the air.

EXTRACTUM CICUTÆ.

Extract of hemlock.

Take freſh hemlock leaves, gathered juſt before the plant begins to flower; which it commonly does in July, or about the latter end of June. Preſs out the juice; and immediately, without ſuffering it to ſettle, put it into a ſhallow glazed earthen pan, over a very gentle fire; keeping it continually ſtirring, to prevent its burning, till it is reduced to a thick greeniſh brown maſs. This maſs may be formed into pills with a little of the powder of the dried leaves of the plant.

This is the preparation of hemlock lately publiſhed at Vienna by

Dr. Storck; who recommends it as a high reſolvent in many obſtinate diſorders, where the common remedies avail nothing. He obſerves, that ſmall doſes ſhould always be begun with, as two grains, made into a pill, twice a day; and that, by gradually increaſing the doſe, it may be given to two, three, or even four drams a day, and continued in ſuch quantities for ſeveral weeks: that it may be uſed with ſafety, in infancy, old age, and pregnancy: that it neither accelerates nor diſturbs the circulation; neither heats nor cools; nor affects the animal functions; that it encreaſes the ſecretions, and renders the mouth moiſt; ſeldom purges; very rarely vomits; ſometimes augments perſpiration; often produces a copious diſcharge of viſcid urine; but, in many patients, does not increaſe any of the ſenſible evacuations: that it removes obſtructions and their conſequences; relieves rheumatic pains, though of long continuance; diſcuſſes ſchirrous tumours, both internal and external; and cures dropſies and conſumptions proceeding from ſchirroſities: that it often diſſolves cataracts, or ſtops their progreſs, and has ſometimes removed the gutta ſerena: that inveterate cutaneous eruptions, ſcald heads, malignant ulcers, cancers, the malignant fluor albus and gonorrhœa of long ſtanding, obſtinate remains of the venereal diſeaſe, and caries of the bones, generally yield to it: that for the moſt part it is neceſſary to continue this medicine for a very conſiderable time, before the cure is effected, or much benefit perceived from it: that in ſome caſes it failed of giving any relief, and that he met with ſome perſons who could not bear its effects; and that conſequently there muſt be ſome latent difference in the habit, the diagnoſtic ſigns of which are at preſent unknown: that though it is by no means infallible, any more than other medicines in their reſpective intentions, yet the great number of deplorable caſes that have been happily cured by it, is ſufficient to recommend it to further trials. The efficacy of this medicine is confirmed by many eminent practitioners abroad; tho' the trials hitherto made of it in this country have not been attended with much ſucceſs. Somewhat perhaps may depend upon the time of the plant's being gathered, and the manner of the preparation of the extract. Dr. Storck himſelf takes notice of ſome miſtakes committed in this reſpect. Some have left the herb in a heap for ſeveral days, whence part of it withered, part rotted, and the juice became thick and mucilaginous. Others have taken a very large quantity of the juice, and boiled it down in copper veſſels with a great heat, by which means a ſtrong fetor was diffuſed to a conſiderable diſtance, and the moſt efficacious parts diſſipated. Others, with officious care, have clarified the juice, and thus obtained a black tenacious extract, retaining but a ſmall degree of the ſpecific ſmell of the plant. The extract duly prepared, according to the above preſcription, is of a greeniſh brown colour, and a very diſagreeable ſmell, like that of mice. But though there is reaſon to believe that much of the extract uſed here had been ill prepared, we can by no means admit that its general inefficacy was owing to this cauſe; for though there are few inſtances of its diſcovering any valuable medicinal powers, there are ſeveral of its having activity enough, even in ſmall doſes, to produce alarming ſymptoms.

After the ſame manner, extracts may be made of

Aconitum,	or	blue wolfſbane.
Belladonna,		deadly nightſhade.
Hyoſciamus,		henbane, &c.

ELATERIUM.

Lond.

Slit ripe wild cucumbers, and having very lightly preſſed out the juices, paſs it through a fine hair ſieve into a glazed earthen veſſel. After ſtanding for ſome hours, the thicker part will fall to the bottom; from which the thinner is to be poured off, and what liquid matter is ſtill left, is to be ſeparated by filtration. The remaining thick part is to be covered with a linen cloth, and expoſed to the ſun, or other gentle heat, till grown thoroughly dry

What happens in part in the foregoing preparation, happens in this comepletely, the ſpontaneous ſeparation of the medicinal matter of the juice on ſtanding for a little time: and the caſe is the ſame with the juices of ſeveral other vegetables, as thoſe of arum, iris, and bryony roots. Preparations of this kind have been commonly called FOECULÆ. The filtration above directed for draining off ſuch part of the watery fluid as cannot be ſeparated by decantation, is not the common filtration through paper, for this does not ſucceed here: the groſſer parts of the juice, falling to the bottom, form a viſcid cake upon the paper, through which the liquid cannot paſs. The ſeparation is to be attempted in another manner, ſo as to drain the fluid from the top. This is effected by placing one end of ſome moiſtened ſtrips of woollen cloth, ſkains of cotton, or the like, in the juice, and laying the other end over the edge of the veſſel, ſo as to hang down lower than the ſurface of the liquor. By this management the ſeparation ſucceeds in perfection.

The Edinburgh pharmacopœia directs the wild cucumbers to be gathered before they have grown fully ripe; and no more of the juice to be taken, than that which iſſues ſpontaneouſly upon ſlitting them. After ſettling, the fluid part is ordered to be poured away; and the thick reſiduum, without any further draining or filtration, to be exſiccated in the ſun.

The juice of the unripe fruit is ſaid to operate with greater violence than of that which is ripe. The foregoing preſcriptions do not perhaps differ ſo much in regard to the degree of maturity, as in the manner of expreſſing it; both ſeeming to intend the fruit to be taken juſt before it was grown ſo thoroughly ripe, as to burſt and ſhed its juice on being touched. If any preſſure be uſed, it ſhould be exceeding gentle, otherwiſe ſome of the inactive pulpy matter of the fruit will be forced out with the juice, and render the ſtrength of the elaterium precarious; a point of primary conſequence to be avoided, in a medicine of ſuch powerful operation, and limited to ſo ſmall a doſe.

Elaterium is a ſtrong irritating cathartic, and oftentimes operates alſo as an emetic. It is never to be ventured on but in indolent phlegmatic habits, as in dropſies, in which it is by ſome particularly recommended. Two or three grains are in general a ſufficient doſe.

SECT. II.

Extracts with Water.

THESE extracts are prepared, by boiling the ſubject in water, and evaporating the ſtrained decoction to a thick conſiſtence.

This proceſs affords us ſome of the more active parts of the plants, free from the uſeleſs, indiſſoluble, earthy matter, which makes the largeſt ſhare of their bulk. There is a great difference in vegetable ſubſtances, with regard to their fitneſs for this operation; ſome yielding to it all their virtues, and others ſcarce any. Thoſe parts in which the ſweet, glutinous, emollient, cooling, bitter, auſtere, aſtringent virtues reſide, are for the moſt part totally extracted by the boiling water, and remain almoſt entire upon evaporating it: whilſt thoſe which contain the peculiar odour, flavour, and aromatic quality, are either not extracted at all, or exhale along with the menſtruum. Thus gentian root, which is almoſt ſimply bitter, yields an extract poſſeſſing, in a ſmall volume, the whole taſte and virtues of the root: wormwood, which has a degree of warmth and ſtrong flavour joined to the bitter, loſes the two firſt in the evaporation, and gives an extract not greatly different from the foregoing: the aromatic quality of cinnamon is diſſipated by this treatment, its aſtringency remaining; whilſt an extract made from the flowers of lavender and roſemary, diſcovers nothing either of the taſte, ſmell, or virtues of the flowers.

General Rules for making Extracts with Water.

1. It is indifferent, in regard to the medicine, whether the ſubject be uſed freſh or dry: ſince nothing that can be preſerved in this proceſs, will be loſt by drying. In regard to the facility of extraction, there is a very conſiderable difference; vegetables in general giving out their virtues more readily, when moderately dried, than when freſh.

2. Very compact dry ſubſtances ſhould be reduced into exceeding ſmall parts, previous to the effuſion of the menſtruum.

3. The quantity of water ought to be no greater than is neceſſary for extracting the virtues of the ſubject. A difference herein will ſometimes occaſion a variation in the quality of the product; the larger the quantity of liquor, the longer fire will be requiſite for evaporating it, and conſequently more of the volatile parts of the ſubject will be diſſipated. A long continued heat likewiſe makes a conſiderable alteration in the matter which is not volatile: ſweet ſubſtances, by long boiling with water, become nauſeous; and the draſtic purgatives loſe their virulence; though without any remarkable ſeparation of their parts,

4. The decoctions are to be depurated by colature; and, afterwards, ſuffered to ſtand for a day or two, when a conſiderable quantity of ſediment is uſually found at the bottom. If the liquor, poured off clear, be boiled down a little, and afterwards ſuffered to cool again, it

will depoſit a freſh ſediment, from which it may be decanted before you proceed to finiſh the evaporation. The decoctions of very reſinous ſubſtances do not require this treatment, and are rather injured by it; the reſin ſubſiding along with the inactive dregs.

5. The evaporation is moſt conveniently performed in broad ſhallow veſſels; the larger the ſurface of the liquor, the ſooner will the aqueous parts exhale. This effect may likewiſe be promoted by agitation.

6. When the matter begins to grow thick, great care is neceſſary to prevent its burning. This accident, almoſt unavoidable if the quantity be large, and the fire applied as uſual, under the evaporating pan, may be effectually prevented, by carrying on the inſpiſſation, after the common manner, no further than to the conſiſtence of a ſyrup, when the matter is to be poured into ſhallow tin or earthen pans, and placed in an oven, with its door open, moderately heated; which acting uniformly on every part of the liquid, will ſoon reduce it to any degree of conſiſtence required. This may likewiſe be done, and more ſecurely, in balneo mariæ, by ſetting the evaporating veſſel in boiling water; but the evaporation is here exceedingly ſlow and tedious.

7. Extracts are to be ſprinkled with a little ſpirit of wine, to prevent their growing mouldy [*L.*] They ſhould be kept in bladders moiſtened with ſweet oil. [*E.*]

EXTRACTUM ABSINTHII.

Extract of wormwood.

Edinb.

Boil dried wormwood leaves in water, ſupplying freſh water occaſionally, till the herb have given out all its virtues to the liquor. Strain the decoction through a woollen cloth, and evaporate it, in a ſand-heat, to the conſiſtence of honey.

This extract is almoſt ſimply bitter; the peculiar flavour of the wormwood being diſſipated in the evaporation. The chemiſts uſually prepare the extract of wormwood from the decoction which remains in the ſtill after the diſtillation of the eſſential oil: and, provided the ſtill has been perfectly clean, and the liquor not ſtood too long in it after the diſtillation, this piece of frugality is not to be diſapproved of; ſince, whether we catch the exhaling vapour, or ſuffer it to be diſſipated in the air, the remaining extract will be the ſame.

EXTRACTUM CENTAURII MINORIS.

Extract of leſſer centaury.

Edinb.

This is directed to be prepared in the ſame manner as the preceding. It is the oldeſt extract we have any account of: its preparation is very accurately and circumſtantially ſet down, in a book uſually aſcribed to Galen, *de virtute centaureæ.* The author of that treatiſe recommends the extract as a medicine of excellent ſervice in many caſes; and looks upon centaury as a ſpecific againſt the bite of a mad dog and other venomous animals. It is doubtleſs an uſeful bitter, poſſeſſing the general virtues of the ſubſtances of that claſs; but cannot well be ſuppoſed to have any others.

EXTRACTUM CHAMÆMELI

Extract of chamomile.

Edinb.

This extract is prepared from the flowers of chamomile, in the ſame manner as thoſe of the leaves of the two preceding plants. Nor is it greatly different from thoſe extracts in quality; the ſpecific flavour of the chamomile exhaling in the evaporation. The chemiſts commonly prepare it, like that of wormwood, from the decoction remaining after the diſtillation of the eſſential oil.

EXTRACTUM ENULÆ CAMPANÆ.

Extract of elecampane.

Lond.

Boil the roots of elecampane in water, preſs and ſtrain the decoction, and ſet it by to ſettle; then pour off the clear liquor, and boil it down to a pilular conſiſtence; taking care, towards the end, to prevent its burning to the veſſel.

This extract retains a conſiderable ſhare of the virtues of the root. Its taſte is ſomewhat warm, and not ungratefully bitteriſh. It is given, from a ſcruple to a dram, in a lax ſtate of the fibres of the ſtomach, and in ſome diſorders of the breaſt.

EXTRACTUM GENTIANÆ.

Extract of gentian.

L. E.

This extract is prepared from the roots of gentian, in the ſame manner as the foregoing extracts. It is of a reddiſh brown colour, and an intenſely bitter taſte, being one of the ſtrongeſt of the vegetable bitters.

EXTRACTUM GLYCYRRHIZÆ.

Extract of liquorice.

Lond.

Lightly boil freſh liquorice roots in water, preſs the decoction through a ſtrainer, and, after the feces have ſubſided, evaporate it until it no longer ſticks to the fingers; taking care, towards the end of the operation, to prevent an empyreuma.

It is convenient, before boiling the root, to cut it tranſverſely into ſmall pieces, that it may more readily give out its virtues by light coction. If the boiling be long continued, the rich ſweet taſte, for which this preparation is valued, will be greatly injured. For the ſame reaſon, the quantity of water ought to be no larger than is abſolutely neceſſary to extract the virtues of the root: a quart, or at the moſt three pints, will be fully ſufficient for a pound of liquorice. It would be of conſiderable advantage to the preparation, and probably (when made in quantity) leſs expenſive to the preparer, to uſe, inſtead of the decoction, juice of liquorice, preſſed out betwixt iron rollers, after the manner practiſed abroad for obtaining the juice of the ſugar-cane.

Large quantities of extract of liquorice have been uſually brought to us from Spain, and other foreign countries; but it is very rarely met with in the ſhops in perfection; the makers of this commodity, both at home and abroad, being either very ſlovenly in its preparation, or deſignedly mixing it with ſand, and other impurities. When made with care, it is exceedingly ſweet, not at all bitteriſh or nauſeous, more agreeable in taſte than the root itſelf, of a pleaſant ſmell, a reddiſh brown colour, and, when drawn out into ſtrings, of a bright golden colour; totally ſoluble in water, without depoſiting any feces.

This preparation would be very convenient for many purpoſes in the ſhops, if kept in a ſomewhat ſofter conſiſtence than that of an extract. The only inconvenience attending this ſoft form is, its being apt in a ſhort time to grow mouldy: this may be effectually prevented, by the addition of a ſmall portion of ſpirit of wine.

EXTRACTUM HELLEBORI NIGRI.

Extract of black hellebore.

L. E.

This extract is prepared from the roots of black hellebore, in the ſame manner as that of elecampane roots above deſcribed. It purges with conſiderably leſs violence than the hellebore in ſubſtance; and appears to be one of the beſt preparations of that root when intended to act only as a cathartic. The doſe is from eight or ten grains to fifteen or more.

EXTRACTUM LIGNI CAMPECHENSIS.

Extract of logwood.

Lond.

Take of logwood, reduced to powder, one pound. Boil it in a gallon of water till half the liquor be conſumed, repeating the coction with freſh water four times or oftener. The ſeveral decoctions are to be mixed together, paſſed through a ſtrainer, and evaporated to a due conſiſtence.

This wood very difficultly yields its virtue to watery menſtrua, and hence the reducing it into fine powder is extremely neceſſary. The Edinburgh diſpenſatory directs ſpirit of wine to be called in aid; ſee the following ſection.

The extract of logwood has been uſed for a conſiderable time in ſome of our hoſpitals, but is now received into the pharmacopœia. It has an agreeable ſweet taſte, with ſome degree of aſtringency; and hence becomes ſerviceable in diarrhœas, for blunting the acrimony of the juices, and moderately conſtringing the inteſtines and orifices of the ſmaller veſſels; it may be given from a ſcruple to half a dram, and repeated five or ſix times a day to advantage. During the uſe of this medicine, the ſtools are frequently tinged red by it, which has occaſioned ſome to be alarmed, as if the colour proceeded from blood: the preſcriber thereof ought to caution the patient againſt any ſurprize of this kind.

EXTRACTUM CORTICIS PERUVIANI, molle et durum.

Extract of Peruvian bark, ſoft and hard.

Lond.

Boil a pound of powdered bark in five or ſix quarts of water, for an hour or two, and pour off the liquor, which, whilſt hot, will be red and tranſparent, but on growing cold becomes yellow and turbid. The remaining bark is to be boiled again in the ſame quantity of water as before, and this proceſs repeated till the liquor remains tranſparent when cold. All the decoctions, ſtrained and mixed together, are to be evaporated over a very gentle fire to a due conſiſtence, care being taken to prevent the matter from burning.

This extract is directed to be kept in the ſhops, both in a ſoft and hard form. The firſt of a proper conſiſtence, for making into pills; the other fit for being reduced into powder.

Peruvian bark is a reſinous drug: the reſin melts out by the heat, but is not perfectly diſſolved by the water; hence, in cooling, it ſeparates, renders the liquor turbid, and in part falls to the bottom, as appears manifeſtly upon examining the ſediment by ſpirit of wine, (ſee the account of this article in p. 197.) This extract might be made to better advantage by the aſſiſtance of ſpirit of wine, after the ſame manner as that of jalap; and this method the Edinburgh college have directed. But, as the committee obſerve, all the ſpirits which can be expected to be employed for this proceſs among us, are accompanied with ſome degree of a bad flavour. This adheres moſt ſtrongly to the phlegmatic part of the ſpirit, which evaporating laſt, muſt communicate this ill flavour to the extract; a circumſtance of very great conſequence; as this medicine is deſigned for ſtomachs too weak to bear a due quantity of bark in ſubſtance. Ten or twelve grains of the hard extract are reckoned equivalent to about half a dram of the bark itſelf.

EXTRACTUM ligni GUAIACI, molle et durum.

Extract of guaiacum wood, ſoft and hard.

Lond.

Boil a pound of ſhavings of guaiacum in a gallon of water, till half the liquor be waſted, repeating the operation four times, or oftener, with the ſame quantities of freſh water. The ſeveral decoctions, paſſed through a ſtrainer, are to be mixed and inſpiſſated together; when the aqueous parts are almoſt entirely exhaled, a little rectified ſpirit of wine is to be added, that the whole may be reduced into an uniform and tenacious maſs. This extract is to be prepared, as the foregoing, in a ſoft and hard form.

Here the reſinous parts of the wood, which were boiled out with the water, are apt to ſeparate towards the end of the inſpiſſation: hence an addition of ſpirit becomes neceſſary, to keep them united with the reſt of the matter. The extract agrees in virtue with the wood.

EXTRACTUM RUTÆ.

Extract of rue.

Lond.

This is prepared from the leaves of rue, in the ſame manner as the extract of elecampane roots already deſcribed. It retains a conſiderable ſhare of the warmth and pungency of the rue; for though the principal virtues of rue reſide in an eſſential oil, yet the oil of this plant, as formerly obſerved under the head of thoſe preparations, is not of a very volatile kind.

EXTRACTUM SABINÆ.

Extract of ſavin.

Lond.

This extract is prepared from the leaves of ſavin, in the ſame manner as the preceding. It does not retain ſo much, as that extract does, of the virtues of its ſubject, the oil of ſavin being more volatile than that of rue.

GUMMI et RESINA ALOES.

Gum and reſin of aloes.

Lond.

Boil four ounces of Socotorine aloes in two pints of water, till as much as poſſible of the aloes be diſſolved. The ſolution ſuffered to reſt for a night, will depoſit the reſin to the bottom of the veſſel: after which, the remaining liquor, ſtrained, if needful, is to be evaporated, that the gum may be left.

The gum of aloes is ſomewhat leſs purgative, and conſiderably leſs diſagreeable than the crude juice. This alteration is not owing, as might be ſuppoſed, to the ſeparation of the reſin; for the pure reſin of aloes is ſtill leſs diſagreeable, and leſs purgative, even than the gum; ſome have denied that it has any purgative virtue at all, and others aſcribe to it an aſtringent quality. I have exhibited this reſin, divided by trituration with the teſtaceous powders, in the doſe of a ſcruple, without obſerving any effect from it. The gum ſeems to be the only part here intended for medicinal uſe. If the reſin be required, it ought to be further purified by ſolution in ſpirit of wine; for as it is obtained by precipitation from an aqueous ſolution of impure aloes, all the impurities of the drug, that are not ſoluble in water, will precipitate along with it

PILULÆ, ſeu EXTRACTUM, RUDII.

The pills or extract of Rudius.
Edinb.

Take of
- Black hellebore roots,
- Colocynth,
- Socotorine aloes, each two ounces;
- Scammony, one ounce;
- Vitriolated tartar, two drams;
- Diſtilled oil of cloves, one dram.

Bruiſe the colocynth and hellebore, pour on them two quarts of water, and boil to the conſumption of half the liquor: paſs the decoction through a ſtrainer, and evaporate it to the conſiſtence of honey, adding the aloes and ſcammony, reduced into fine powder. When the maſs is taken from the fire, mix into it the vitriolated tartar, and diſtilled oil.

This preparation is a medicine of great importance as a cathartic, ſimilar to one deſcribed hereafter, under the title of *Extractum catharticum.* Water appears to be a better menſtruum, than ſpirituous liquors, both for the colocynth and the hellebore; the watery extracts being much leſs irritating than the ſpirituous, though not perhaps leſs effectual purgatives.

ROB BACCARUM JUNIPERI.

Rob of juniper berries.

Let juniper berries, thoroughly bruiſed, be boiled in a ſufficient quantity of water, the liquor ſtrained, and inſpiſſated to the conſiſtence of honey.

This preparation may be made alſo from the decoction that remains after the diſtillation of the eſſential oil of the berries. It has a ſweet balſamic taſte, accompanied with a greater or leſs bitterneſs, according as the ſeeds of the berry were more or leſs thoroughly bruiſed. This elegant preparation, though not received in our pharmacopœias, ſeems not unworthy of a place in the ſhops. Hoffman has a great opinion of it in debilities of the ſtomach and inteſtines, and in the difficulties of urine, familiar to perſons of an advanced age.

SECT. III.

Extracts with rectified Spirit.

RECTIFIED ſpirit of wine diſſolves the eſſential oils and reſins of vegetables, and does not readily carry off the oil in its exhalation; the heat ſufficient to exhale pure ſpirit, being much leſs than that in which water conſiderably evaporates, or moſt eſſential oils diſtil. Hence a reſinous or ſpirituous extract of wormwood, contrary to that made with water, contains the warmth and flavour, as well as bitterneſs, of the herb; one made from cinnamon poſſeſſes its aromatic virtue, as well as its aſtringency; and one from lavender and roſemary flowers retains great part of their flavour and virtues; the volatile parts, which are carried off by water in its evaporation, being left behind by ſpirit.

The ſpirit employed for this purpoſe ſhould be perfectly free from any ill flavour; which would be communicated, in part, to the preparation; and from any admixture of phlegm or water, which would not only vary its diſſolving power, but likewiſe, evaporating towards the end of the inſpiſſation, would promote the diſſipation of the volatile parts of the ſubject. Hence alſo the ſubject itſelf ought always to be dry. Thoſe ſubſtances, which loſe their virtue by drying, loſe it equally on being ſubmitted to this treatment with the pureſt ſpirit.

The inſpiſſation ſhould be performed, from the beginning, in the gentle heat of a water-bath. It is not needful to ſuffer the ſpirit to evaporate in the air. Greateſt part of it may be recovered by collecting the vapour in the common diſtilling veſſels. (See chap. v.) If the diſtilled ſpirit be found to have brought over any flavour from the ſubject, it may be advantageouſly reſerved for the ſame purpoſes again.

It is obſervable, that though rectified ſpirit be the proper menſtruum of the pure volatile oils, and of the groſſer reſinous matter of vegetables, and water of the mucilaginous and ſaline; yet theſe principles are, in almoſt all plants, ſo intimately combined together, that whichever of theſe liquors be applied at firſt, it will take up a portion of what is directly ſoluble only in the other. Hence ſundry vegetables, extremely reſinous, and whoſe virtues conſiſt chiefly in their reſin, afford nevertheleſs very uſeful extracts with water, though not equal to thoſe which may be obtained by a prudent application of ſpirit. Hence, alſo, the extracts made from moſt vegetables by pure ſpirit are not mere reſins; a part of the gummy matter, if the ſubject contained any ſuch, being taken up along with the reſin, an admixture of great advantage to it in a medicinal view. The ſpirituous extracts of ſeveral vegetable ſubſtances, as mint-leaves, rhubarb, ſaffron, diſſolve in water as well as in ſpirit.

Pure reſins are prepared by mixing, with ſpirituous tincture of very reſinous vegetables, a quantity of water. The reſin, incapable of remaining diſſolved in the watery liquor, ſeparates and falls to the bottom; leaving in the menſtruum ſuch other principles of the plant as the ſpirit might have extracted at firſt along with it.

RESINA JALAPPÆ.
Reſin of jalap.
Edinb.

Take any quantity of jalap root very well bruiſed. Pour upon it ſo much rectified ſpirit of wine as will cover it to the height of four fingers; and digeſt them together in a ſand-heat, that the ſpirit may extract the virtue of the root. Filter the tincture through paper, put it into a glaſs cucurbit, and diſtil off one half of the ſpirit. Add to the remainder a proper quantity of water, and the reſin will precipitate to the bottom. Divide it into little cakes, and dry it with a very gentle heat.

This preparation is a pure reſin; ſuch gummy parts as the ſpirit might have taken up, remaining ſuſpended in the liquor. Its indiſſolubility in any aqueous fluid, and its tenacious quality, by which it adheres to the coats of the inteſtines, and occaſions great irritation and gripes, forbid its being ever given by itſelf. It is fitted for uſe, by thoroughly triturating it with teſtaceous powders; by grinding it with almonds or powdered gum, and making the compound into an emulſion with water; or by diſſolving it in ſpirit of wine, and mixing the ſolution with a proper quantity of ſyrup, or of mucilage. Six or eight grains, managed in either of theſe ways, prove powerfully cathartic, and generally without griping or greatly diſordering the body.

It has been ſaid, that reſin of jalap is frequently adulterated with common reſin; and that this abuſe may be diſcovered by ſpirit of wine, which diſſolves the former, without touching the latter. This criterion, however, is not to be relied on; for there are many cheap reſins which are ſoluble in ſpirit of wine as well as that of jalap; and there is not any one which may not be artfully rendered ſo.

RESINA SCAMMONII.
Reſin of ſcammony.
Edinb.

This reſin is prepared in the ſame manner as the preceding; with which it agrees alſo in its general qualities; occaſioning vehement gripes if taken by itſelf, and operating generally with ſufficient ſafety when properly divided. Scammony is doubtleſs a valuable purgative; but what advantage there is in thus ſeparating the purgative reſin from its natural corrector, the gummy part, is not ſo clear.

RESINA GUAIACI.
Reſin of guaiacum.
Edinb.

This reſin is prepared in the ſame manner as the two preceding, either from the wood of guaiacum, or from what is called gum guaiacum. It is obtained moſt commodiouſly from the latter.

The virtue of guaiacum conſiſts wholly in its reſin; and the reſin of the wood, and of the gum ſo called, is perfectly one and the ſame; the gum being the natural exudation from the tree. If this exudation could be had pure, there would be no occaſion for any artificial preparation of this kind; but it always contains a large proportion of earthy matter, ſo as to ſtand greatly in need of this method of purification. Sixteen ounces of the beſt gum guaiacum do not yield above twelve ounces of pure reſin. The ſame quantity of the wood yields about three ounces, more or leſs, according to its goodneſs. The bark is ſomewhat leſs reſinous than the wood.

RESINA CORTICIS PERUVIANI.
Reſin of Peruvian bark.
Edinb.

This reſin is made in the ſame manner as the foregoing, and proves an elegant preparation of the bark, much ſtronger in taſte than the watery extract deſcribed in the preceding ſection. It is nearly equivalent to about ten times its quantity of the bark in ſubſtance. There does not, however, appear to be any advantage in ſeparating the pure reſin by the addition of water, either in this or in the other articles. In regard to the bark particularly, it is more adviſable to endeavour to unite into one compound all that can be extracted from it by watery and ſpirituous menſtrua; and accordingly the Edinburgh college has received a preparation of this kind, which is deſcribed in the following ſection.

EXTRACTUM CROCI.
Extract of ſaffron.
Pharm. Brandenburg.

Digeſt ſaffron in freſh quantities of pure ſpirit of wine, ſo long as the ſpirit extracts any colour from it. Mix the ſeveral tinctures together, and diſtil off the ſpirit, in a tall glaſs veſſel, by the heat of a water-bath, till the reſiduum appear of the conſiſtence of oil or balſam.

This is a general proceſs, for the preparation of extracts from aromatic and other odorous ſubſtances; which extracts have been commonly diſtinguiſhed by the name of *eſſential,* for the ſame reaſon that the volatile oils are ſo called, their retaining the ſpecific odour and flavour of the ſubjects. In making the extracts of this claſs, the inſpiſſation ſhould never be carried much lower than the conſiſtence above directed; for when the matter has become thick, the ſpirit exhales more difficultly than before, and is more apt to carry off with it ſome of the volatile parts. If the preparation be wanted in a ſolid or conſiſtent form, it is more adviſable to mix with it a ſuitable quantity of any appropriated powdery matters, than to hazard the loſs of its virtue by a further evaporation. If any addition be wanted for giving conſiſtence to the extract of ſaffron, ſaffron in ſubſtance appears to be the beſt.

The eſſential extract of ſaffron is an elegant and high cordial. Boerhaave ſays, it poſſeſſes ſuch exhilarating virtues, that if uſed a little too freely, it occaſions an almoſt perpetual and indecent laughing: he obſerves, that it tinges the urine of a red colour; and that it mingles with water, ſpirit, and oils, but is moſt conveniently taken in a glaſs of Canary or other rich wine. A few drops are a ſufficient doſe. The diſtilled ſpirit contains alſo ſome ſhare of the virtue of the ſaffron, though far leſs than the extract. It is ſaid to have an advantage above moſt other cordial ſpirits, of diſpoſing the patient to ſweat. It may be taken, properly diluted, from a dram to half an ounce.

SECT. IV.

Extracts with Spirit and Water.

THERE are ſundry vegetables, particularly thoſe of a reſinous nature, which are treated, to better advantage, with a mixture of water and ſpirit, than with either of them ſingly. The virtues of reſinous woods, barks, and roots, may indeed be in great part extracted by long boiling in freſh portions of water; but at the ſame time they ſuffer a conſiderable injury from the continued heat neceſſary for the extraction, and for the ſubſequent evaporation of ſo large a quantity of the fluid. Rectified ſpirit of wine is not liable to this inconvenience. But the extracts obtained by it, from the ſubſtances here intended, being almoſt purely reſinous, are leſs adapted to general uſe than in thoſe in which the reſin is divided by an admixture of the gummy matter, of which water is the direct menſtruum.

There are two ways of obtaining theſe compound or gummy-reſinous extracts: one, by uſing proof ſpirit, that is, a mixture of about equal parts of ſpirit and water, for the menſtruum; the other, by digeſting the ſubject firſt in pure ſpirit and then in water, and afterwards uniting into one maſs the parts which the two menſtrua have ſeparately extracted. In ſome caſes, where a ſufficiency of gummy matter is wanting in the ſubject, it may be artificially ſupplied, by inſpiſſating the ſpirituous tincture to the conſiſtence of a balſam, then thoroughly mixing with it a thick ſolution of any ſimple gum, as mucilage of gum Arabic, and exſiccating the compound with a gentle heat. By this method are obtained elegant gummy reſins, extemporaneouſly miſcible with water into milky liquors.

EXTRACTUM JALAPII.

Extract of jalap.

Lond.

Upon powdered jalap pour ſome rectified ſpirit of wine, and, with a gentle heat, extract a tincture: boil the remaining jalap in freſh parcels of water. Strain the firſt tincture, and draw off the ſpirit, till what remains begins to grow thick. Boil the ſtrained decoction alſo to a like thickneſs: then mix both the inſpiſſated matters together, and with a gentle fire reduce the whole to a pilular conſiſtence.

Edinb.

Take of

Jalap root, one pound;

Rectified ſpirit of wine, four pounds.

Digeſt them together four days, and pour off the tincture; and put to the remaining magma ten pounds of water; boil it to two pounds, and paſs it through a ſtrainer, and evaporate to the conſiſtence of a thin honey. Diſtil off the ſpirit from the tincture, till the remainder be of the ſame conſiſtence. Then mix the two inſpiſſated liquors well together; and evaporate to the conſiſtence of an extract.

THIS extract is an uſeful purgative, preferable to the crude root, as being of more uniform ſtrength, and as the doſe, by the rejection of the woody parts, is rendered ſmaller. The mean doſe is twelve grains. If the ſpirituous tincture were inſpiſſated by itſelf, it would afford a reſinous maſs, which, unleſs thoroughly divided by proper admixtures, occaſions violent griping, and yet does not prove ſufficiently cathartic; the watery decoctions yield an extract, which operates exceeding weakly: both joined together, as in this preparation, compoſe an effectual and ſafe purge. This method of making extracts might be advantageouſly applied to ſundry other reſinous ſubſtances, as the dry woods, roots, barks, &c. A ſmall quantity of ſpirit takes up the reſin, and much leſs water than would otherwiſe be neceſſary, extracts all the other ſoluble parts.

In a former edition of the Edinburgh pharmacopœia, a little fixt alkaline ſalt was ordered to be added to the water in which the jalap is boiled after the action of ſpirit; on a ſuppoſition, that this would enable the water to extract more from the root than it could by itſelf. But, ſo far as the quantity of the alkaline ſalt could go, it had the oppoſite effect; impeding the action of the water. The reſinous parts of the jalap are diſſolved by the ſpirit; and little other than the gummy matter remains for water to extract. Now, if pure gum Arabic be put into water along with any alkaline ſalt, the ſalt will render the water incapable of diſſolving the gum. If the gum be diſſolved firſt, the addition of any alkaline ſalt will precipitate it.

EXTRACTUM CORTICIS PERUVIANI.

Extract of Peruvian bark.

Edinb.

The college of Edinburgh has directed the extract of bark to be made with water and ſpirit, in the ſame manner as the preceding. In the bark we may diſtinguiſh two kinds of taſtes, an aſtringent and a bitter one; the former of which ſeems to reſide in the reſinous matter, and the latter chiefly in the gummy. The watery extract is moderately ſtrong in point of bitterneſs, but of the aſtringency it has only a ſmall degree. The pure reſin, on the other hand, is ſtrong in aſtringency, and weak in bitterneſs. Both qualities are united in the preſent extract; which appears to be the beſt preparation of this kind that can be obtained from this valuable drug.

EXTRACTUM LIGNI CAMPECHENSIS.

Extract of logwood.

Edinb.

This extract is directed in the Edinburgh pharmacopœia to be prepared as the foregoing; and the ſame treatment is judiciouſly ordered for all the reſinous drugs in general.

EXTRACTUM CATHARTICUM.

Cathartic extract.

Lond.

Take of
- Socotorine aloes, an ounce and a half;
- Colocynth, ſix drams;
- Scammony,
- Leſſer cardamoms, huſked, each half an ounce;
- Proof ſpirit, one pint.

Having cut the colocynth ſmall, and bruiſed the ſeeds, pour on them the vinous ſpirit, and digeſt with a gentle heat for four days. Preſs out the tincture, and diſſolve therein the aloes and ſcammony, firſt ſeparately reduced to powder. Then draw off the ſpirit, and inſpiſſate the remaining maſs to a pilular conſiſtence.

This compoſition anſwers very effectually the intention expreſſed in its title, ſo as to be relied on in caſes where the patient's life depends on its taking place. The doſe is from fifteen grains to half a dram. The proof ſpirit is a very proper menſtruum for the purgative materials; diſſolving nearly the whole ſubſtance of the aloes and ſcammony, except the impurities; and extracting from the colocynth, not only the irritating reſin, but great part of the gummy matter. The purgative virtue of this laſt article appears indeed to be ſufficiently got out by water; and the watery extract to operate with greater mildneſs than that with proof ſpirit, though in general effectually: the Edinburgh college have accordingly preferred water, in making a preparation, of the ſame intention with this. In our former pharmacopœias, three ſpices were employed in this compoſition, cinnamon, mace, and cloves: the cardamom ſeeds, now introduced, are preferable, on account of their aromatic matter being of a leſs volatile nature; though a conſiderable part of the flavour, even of theſe, is diſſipated during the evaporation of the phlegmatic part of the proof ſpirit.

CONFECTIO CARDIACA.

Cordial confection.

Lond.

Take of
- Roſemary tops, freſh,
- Juniper berries, each one pound;
- Leſſer cardamom ſeeds, huſked,
- Zedoary,
- Saffron, each half a pound.

Extract a tincture from theſe ingredients with about a gallon and a half of proof ſpirit: let the tincture be ſtrained off, and reduced by a gentle heat to the weight of about two pounds and a half; then add the following ingredients, very finely pulverized, and make the whole into an electary.
- Compound powder of crabs claws, ſixteen ounces;
- Cinnamon,
- Nutmegs, each two ounces;
- Cloves, one ounce;
- Double-refined ſugar, two pounds.

This confection is compoſed of the more unexceptionable ingredients of a compoſition formerly held in great eſteem, and which was called, from its author, Confectio Raleighana. The committee, appointed for reforming the London pharmacopœia, obſerve, that the original confection is compoſed of no leſs than five and twenty particulars; each of which they examined apart, except one, *ros ſolis*; the flower of which is too ſmall to be gathered in ſufficient quantity for the general uſe of the medicine, and the plant is poſſeſſed of hurtful qualities, as is experienced in cattle that feed where it grows. In this examination, many of the extracts came out ſo very nauſeous, that it was impoſſible to retain them, conſiſtent with any due regard to the taſte of the compoſition. But ſome few, of equal efficacy with any of the reſt, being of a tolerable taſte and flavour, were compounded in different proportions; and when, after many trials, a compoſition was approved, the quantity of each material, that would yield the proportion of extract which entered that compoſition, was calculated, and thence the proportions collected, as now ſet down; after which the compound extract was made, and found to anſwer expectation.

The confection, as now reformed, is a ſufficiently grateful, and mo-

moderately warm cordial; and frequently given in that intention, from eight or ten grains to a ſcruple or upwards, in boluſes and draughts. The extract retains a conſiderable ſhare of the flavour and virtue of the ingredients, though not near ſo much as if a rectified ſpirit had been employed. The operator ſhould be particularly careful to extract as much from the ingredients as the ſpirit will take up; otherwiſe the inſpiſſated matter turns out ſo thin, and of ſo little tenacity, that the powders are apt to ſeparate and ſubſide from it in keeping. The crabs-claw powder does not appear to be very neceſſary, and is inſerted rather in compliance with the original, than from its contributing any thing to the intention of the medicine.

ELECTARIUM CARDIACUM vel CONFECTIO CARDIACA.

Cordial Confection.

Edinb.

Take of

- Conſerve of orange-peel, three ounces;
- Candied nutmegs, one ounce and a half;
- Candied ginger, ſix drams;
- Cinnamon, powdered, half an ounce;
- Syrup of orange-peel, as much as is ſufficient to make an electary, according to art.

SECT. V.

Extracts by long Digeſtion.

IN the foregoing part of this chapter, it has been obſerved, that the virtues of vegetable decoctions are altered by long boiling. Decoctions or infuſions of draſtic vegetables, by long continued boiling or digeſtion, loſe more and more of their virulence; and at the ſame time depoſit more and more of a groſs ſediment, reſulting probably from the decompoſition of their active parts. On this foundation it has been attempted to obtain ſafe and mild preparations from ſundry virulent drugs; and ſome of the chemiſts have ſtrongly recommended the proceſs, though without ſpecifying, or giving any intimation of, the continuance of boiling requiſite for producing the due mildneſs in different ſubjects. M. Baumé, in his *Elemens de pharmacie*, lately publiſhed, has given a particular account of an extract of opium prepared on this principle; the ſubſtance of which is as follows.

Extract of opium prepared by long digeſtion.

Let five pounds of good opium, cut in pieces, be boiled about half an hour, in twelve or fifteen quarts of water. Strain the decoction, and boil the remainder once or twice in freſh water, that ſo much of the opium as is diſſoluble in water may be got out. Evaporate the ſtrained decoctions to about ſix quarts; which being put into a tin cucurbit, placed in a ſand bath, keep up ſuch a fire as may make the liquor nearly boil, for three months together, if the fire be continued day and night, and for ſix months, if it be intermitted in the night: filling up the veſſel with water in proportion to the evaporation; and ſcraping the bottom with a wooden ſpatula from time to time, to get off the ſediment which begins to precipitate after ſome days digeſtion.

geſtion. The ſediment needs not to be taken out till the boiling be finiſhed; at which time the liquor is to be ſtrained when cold, and evaporated to an extract, of a due conſiſtence for being formed into pills.

The author obſerves, that by keeping the liquor ſtrongly boiling, the tedious proceſs may be conſiderably expedited, and the ſix months digeſtion reduced to four months: that in the beginning of the digeſtion, a thick, viſcous, oily matter riſes to the top, and forms a tenacious ſkin as the liquor cools; this is ſuppoſed to be analogous to eſſential oils, though wanting their volatility: that the oil begins to diſappear about the end of the firſt month, but ſtill continues ſenſible till the end of the third, forming oily clouds as often as the liquor cools: that the reſin at the ſame time ſettles to the bottom in cooling, preſerving for a long while its reſinous form, but by degrees becoming powdery, and incapable of being any longer ſoftened, or made to cohere by the heat: that when the proceſs is finiſhed, part of it ſtill continues a perfect reſin, diſſoluble in ſpirit of wine, and part an indiſſoluble powder: that when the digeſted liquor is evaporated to about a quart, and ſet in the cold till next day, it yields a browniſh earthy-ſaline matter, called the eſſential ſalt of opium, in figure nearly like the ſedative ſalt obtained from borax, intermingled with ſmall needled cryſtals. He gives an account of his having made this preparation ſix or ſeven times. The veſſel he made uſe of was about two inches and a half diameter in the mouth: the quantity of water evaporated was about twenty-four ounces a day, and from a hundred and thirty to a hundred and forty quarts during the whole digeſtion. Out of ſixty-four ounces of opium, ſeventeen ounces remained undiſſolved in the water: the quantity of reſinous matter, precipitated during the digeſtion, was twelve ounces: from the liquor, evaporated to a quart, he obtained a dram of eſſential ſalt, and might, he ſays, have ſeparated more; the liquor being then further evaporated to a pilular conſiſtence, the weight of the extract was thirty-one ounces.

It is ſuppoſed, that the narcotic virtue of opium reſides in the oily and reſinous parts; and that the gummy extract, prepared by the above proceſs, is endowed with the calming, ſedative, or anodyne powers of the opium, diveſted of the narcotic quality as it is of the ſmell, and no longer productive of the diſorders, which opium itſelf, and the other preparations of it, frequently occaſion. A caſe is mentioned, from which the innocence and mildneſs of the medicine are apparent; fifty grains having been taken in a day, and found to agree well, where the common opiate preparations could not be borne. But what ſhare it poſſeſſes of the proper virtues of opium, is not ſo clear; for the cure of convulſive motions of the ſtomach and vomitings, which at length happened after the extract had been continued daily in the above doſes for ſeveral years *(pluſieurs années)* cannot perhaps be aſcribed fairly to the medicine.

If the theory of the proceſs, and of the alteration produced by it in the opium, be juſt; a preparation equivalent to the above may be obtained in a much ſhorter time. If the intention be to ſeparate the reſinous and oily parts of opium, they may be ſeparated, by means of pure ſpirit of wine, in as many hours as the digeſtion requires months. The ſeparation will alſo be as complete, in regard to the remaining gum, though ſome part of the gum will in this method be loſt, a little of it being taken up by the ſpirit along with the other principles.

In what particular part of opium its peculiar virtues reſide, has not perhaps been inconteſtably aſcertained; but thus much ſeems clear from experiment, that the pure gum, freed from all that ſpirit can diſſolve, has little, or rather nothing of its ſoporific power.

There are grounds alſo to preſume, that by whatever means we deſtroy or diminiſh what is called the narcotic, ſoporific, virulent quality of opium, we ſhall deſtroy or diminiſh likewiſe its ſalutary operation. For the ill effects, which it produces in certain caſes, ſeem to be only the neceſſary conſequences of the ſame power, by which it proves ſo beneficial in others.

CHAPTER VII.

Empyreumatic Oils.

VEGETABLE and animal ſubſtances, and mineral bitumens, on being urged with a red heat, have their original properties deſtroyed, and are reſolved or changed into products of a different nature from what pre-exiſted in the ſubject. By burning them in the open air, a part is changed into aſhes, a part into ſoot, and a part is diſſolved by the air. Expoſed to the fire in cloſe veſſels (as in thoſe called retorts, having receivers adapted to them for detaining the volatile parts), they are reſolved into fetid oils, and different kinds of ſaline ſubſtances, which riſe into the receiver; and a black coal, which remains behind, and which, though no further alterable in cloſe veſſels, on admitting air, burns into white aſhes. The oils, called from their fetid burnt ſmell, *empyreumatic*, are the objects of the preſent chapter. Some of theſe however, being obtained in the ſame proceſs with certain ſaline bodies of more importance than themſelves, are referred to the head of Saline Preparations.

OLEUM BUXI.
Oil of box.
Lond.

Diſtil pieces of box wood in a retort, with a ſand-heat gradually increaſed. The oil will come over along with an acid ſpirit, which is to be ſeparated by a funnel.

OLEUM GUAIACI.
Oil of guaiacum.
Edinb.

Put any quantity of chips of guaiacum into an earthen long-neck, or a glaſs retort, and diſtil either in a ſand-bath or an open fire, increaſing the heat by degrees. At firſt an acid liquor will come over, afterwards a light red oil, and at length, in the utmoſt degree of fire, a thick black oil which ſinks through the other liquors to the bottom of the receiver.

Oils may be obtained after the ſame manner from every kind of wood.

THE retort may be filled almoſt up to the neck with chips or ſmall pieces of box or guaiacum, the refuſe of the turner. Lute on a glaſs receiver with a paſte made of linſeed meal and water: ſet the retort on the bottom of a deep iron pot, with a little ſand under it; and fill up the ſpace, betwixt it and the ſides of the pot, with more ſand. Apply at firſt a gentle fire, and gradually increaſe it to the utmoſt that the furnace is capable of giving. Particular care muſt be had not to raiſe the heat too faſt when the firſt reddiſh oil begins to come over; for at this time, a large quantity of elaſtic vapour is extricated from the wood, which, if the fire be urged, or if it be not allowed an exit, will burſt the veſſels.

When the diſtillation is finiſhed, and the veſſels grown cool, unlute the receiver, and ſeparate the oil from the acid liquor. The method of performing this by the funnel, as directed in the firſt of the above proceſſes, is as follows: Pour the ſeveral liquors into a glaſs funnel, whoſe ſtem is ſtopt by the finger. The ponderous black oil ſinks lowermoſt; ſuffer this to run out; then cloſe the ſtem again, and afterwards ſeparate the acid liquor from the lighter oil, in the ſame manner. They are more perfectly ſeparated, by pouring them into a hollow cone of filtering paper, moiſtened with water, and placed in a funnel: the acid liquor paſſes through, and the oil remains on the paper.

The oils obtained by this treatment from different woods and plants, are nearly of the ſame qualities: they have all a very diſagreeable acrid taſte, and a burnt ſtinking ſmell; without any thing of the peculiar flavour, taſte, or virtues of the ſubject which afforded them. The preſent practice rarely employs thoſe oils any otherwiſe than for external purpoſes, as the cleanſing of foul bones, for the tooth-ach, againſt ſome kinds of cutaneous eruptions, old pains and aches, and the like; and for theſe not very often.

OLEUM LATERITIUM.

Oil of bricks.

Lond.

Heat bricks red hot, and quench them in oil olive, till they have ſoaked up all the oil: then break them into pieces ſmall enough to be conveniently put into a retort; and diſtil with a ſand-heat gradually increaſed. An oil will ariſe, together with a ſpirit, which is to be ſeparated from it as in the foregoing proceſs.

This preparation has had a place in moſt diſpenſatories, under the pompous names of oleum philoſophorum, ſanctum, divinum, benedictum, and others, as improper as that under which it ſtands above. It is really oil olive, rendered ſtrongly empyreumatic by heat. The ſpirit, ſo called, is no more than phlegm, or water, tainted with the burnt flavour of the oil. It has been celebrated for ſundry external purpoſes, particularly againſt gouty and rheumatic pains, deafneſs and tingling of the ears, &c. and has ſometimes been given inwardly. But common practice ſeems to have now entirely rejected this loathſome remedy; and the college of Edinburgh have expunged it from their book.

OLEUM PETROLEI BARBADENSIS.

Oil of Barbadoes tar.

Lond.

Diſtil Barbadoes tar with a ſand-heat. An oil will ariſe, together with a ſpirit, which is to be ſeparated from it.

Dr. Pemberton obſerves, that this oil will be more or leſs thin, according to the continuance of the diſtillation; that the tar will at laſt be reduced to a black coal and then the oil will be pretty deep in colour, though perfectly fluid; that this oil has a property ſimilar to that of the tincture of nephritic wood in water, appearing blue when looked upon, but of an orange colour when held betwixt the eye and the light. By long keeping, I have obſerved it to loſe this property. It is ſomewhat leſs diſagreeable than the foregoing oils, though very acrid and ſtimulating.

OLEUM TEREBINTHINÆ ÆTHEREUM; et empyreumaticum ſive BALSAMUM.

The ethereal oil of turpentine, and the empyreumatic oil or balſam.

Lond.

Diſtil the eſſential oil of turpentine in a retort, with a very gentle fire, until what remains has acquired the conſiſtence of a balſam.

Balſam of turpentine may likewiſe be obtained from the yellow reſin left after the diſtillation of the eſſential oil. Upon diſtilling this in a retort, at firſt a portion of thin oil ariſes, which is to be kept by itſelf, and afterwards a thick balſam. There remains in the retort a blackiſh reſin, called colophony.

Edinb.

Melt any quanity of turpentine, over a gentle fire, and pour it into a glaſs retort, of which it may fill one half: then lute on a receiver, and diſtil in a ſand-bath. Apply at firſt a gentle heat, upon which an acid ſpirit will come over; and on gradually increaſing the fire, a limpid oil, commonly called ethereal ſpirit of turpentine; at length a yellow oil will ariſe. In the bottom of the retort, there remains a reſinous maſs, called colophony: which if ſtill further urged with ſucceſſive degrees of heat to the higheſt, gives firſt a red oil, and afterwards a darker coloured one, which ſinks through the other liquors to the bottom of the receiver.

These proceſſes are tedious, and accompanied with a good deal of danger; for unleſs the luting be very cloſe, ſome of the vapour will be apt to get through, which if it catch fire, will infallibly burſt the veſſels. The oil here called ethereal, does not conſiderably differ in ſpecific gravity, ſmell, taſte, or medical qualities, from the cheaper one obtained by the addition of water in the common ſtill: nor are the empyreumatic thin oil and balſam of any great eſteem in practice.

OLEUM COPAIVÆ COMPOSITUM.

Compound oil of balſam of copaiva.

Lond.

Take two pounds of balſam of copaiva, and four ounces of gum guaiacum. Diſtil them in a retort, continuing the operation till a pint of oil come over.

This mixture, undiſtilled, proves a medicine of conſiderable efficacy in rheumatic caſes, &c. In diſtillation, the guaiacum gives over little, ſerving chiefly for the ſame purpoſe that bricks do in the oleum lateritium. The balſam diſtilled in a retort, with or without the gum, yields firſt a light coloured oil, ſmelling conſiderably of the ſubject; this is immediately followed by a darker coloured oil, and afterwards by a blue one, both which have little other ſmell than the empyreumatic one that diſtinguiſhes the oils of this claſs: their taſte is very pungent and acrimonious. This balſam diſtilled with water, yields as much eſſential oil, as above of empyreumatic.

OLEUM CERÆ.

Oil of wax.

Edinb.

Melt yellow bees wax with twice its quantity of ſand, and diſtil in a retort placed in a ſand furnace. At firſt an acid liquor ariſes, and afterwards a thick oil, which ſticks in the neck of the retort, unleſs it be heated by applying a live coal. This may be recti-

ſied

fied into a thin oil, by diſtilling it ſeveral times, without addition, in a ſand-heat.

Boerhaave directs the wax, cut in pieces, to be put into the retort firſt, ſo as to fill one half of it; when as much ſand may be poured thereon as will fill the remaining half. This is a neater, and much leſs troubleſome way, than melting the wax, and mixing it with the ſand, before they are put into the retort. Boerhaave greatly commends this oil for roughneſs and chaps of the ſkin, and ſimilar purpoſes: the college of Straſburg ſpeak alſo of its being given internally, and ſay it is a powerful diuretic *(ingens diureticum)* in doſes of from two to four and more drops; but its diſagreeable ſmell has prevented its coming into uſe among us.

Oleum animale Dippelii.

Dippel's animal oil.

Take any quantity of the empyreumatic oil diſtilled from animal ſubſtances, as that of hartshorn (the preparation of which is deſcribed along with that of the volatile ſalt and ſpirit, in the following chapter). Put it into a glaſs retort, and having fitted on a receiver, diſtil in a ſand-heat The oil will ariſe paler coloured and leſs fetid; and a black coaly matter will remain behind. Repeat the diſtillation in freſh retorts, till the oil ceaſe to leave any feces, and till it loſe its ill ſmell, and acquire an agreeable one.

The quantity of oil employed in this proceſs ſhould be conſiderable; for it leaves ſo much black matter behind in the ſeveral diſtillations, that it is reduced, at laſt, to a ſmall portion of its original quantity. The diſtillation muſt be repeated, at leaſt, twelve times; and frequently the requiſite ſubtilization will ſcarcely be obtained with leſs than twenty diſtillations. It is ſaid, that the effect may be expedited, by mixing the oil with quicklime into a ſoft paſte; the lime keeping down more of the groſs matter, than would remain without ſuch an addition.

Animal oils thus rectified, are thin and limpid, of a ſubtile, penetrating, not diſagreeable ſmell and taſte. They are ſtrongly recommended as anodynes and antiſpaſmodics, in doſes of from fifteen to thirty drops. Hoffman reports, that they procure a calm and ſweet ſleep, which continues often for twenty hours, without being followed by any languor or debility, but rather leaving the patient more alert and chearful than before: that they procure likewiſe a gentle ſweat, without increaſing the heat of the blood: that given to twenty drops or more, on an empty ſtomach, ſix hours before the acceſſion of an intermittent fever, they frequently remove the diſorder: and that they are likewiſe a very generous remedy in inveterate and chronical epilepſies, and in convulſive motions, eſpecially if given before the uſual time of the attack, and preceded by proper evacuations.

The empyreumatic oils of vegetables, rectified in the ſame manner by repeated diſtillations, ſuffer a like change with the animal; loſing their dark colour and offenſive ſmell, and becoming limpid, penetrating, and agreeable. In this ſtate they are ſuppoſed, like the animal oils, to be anodyne, antiſpaſmodic, and diaphoretic, or ſudorific. It is obſervable, that all the empyreumatic oils diſſolve in ſpirit of wine, and that the oftener they are rectified or rediſtilled, they diſſolve the more readily: a circumſtance in which they differ remarkably from eſſential oils, which, by repeated diſtillations, become more and more difficult of ſolution.

How far theſe preparations really poſſeſs the virtues, that have been aſcribed to them, has not yet been ſufficiently determined by experience; the tediouſneſs and trouble of the rectification having prevented their coming into general uſe, or being often made. They are liable alſo to a more material inconvenience in regard to their medicinal uſe, precariouſneſs in their quality: for how perfectly ſoever they be rectified, they gradually loſe, in keeping, the qualities they had received from that proceſs, and return more and more towards their original fetidneſs.

CHAPTER VIII.

Salts and Saline Preparations.

SECT. I.

Fixt alkaline Salts.

THE aſhes of moſt vegetables, ſteeped or boiled in water, give out to it a ſaline ſubſtance, ſeparable in a ſolid form by evaporating the water. This kind of ſalt never pre-exiſts in the vegetable, but is always generated during the burning. It is called fixt alkaline ſalt.

SAL TARTARI.

Salt of tartar.

Lond.

Let any kind of tartar be wrapt up in ſtrong brown paper, firſt made wet, or included in a proper veſſel, and expoſed to the fire, that its oil may be burnt out: then boil it in water, filter the ſolution, and evaporate it, till there remain a dry ſalt; which is to be kept in a veſſel cloſely ſtopt.

Edinb.

Wrap up any quantity of white tarter in wetted paper, and calcine it in a reverberatory furnace till it become exceedingly white. Then diſſolve it in warm water, filter the ſolution, and evaporate it in a clean iron veſſel, till a ſalt be left behind, perfectly dry, and white as ſnow; obſerving towards the end of the operation to keep the matter continually ſtirring with an iron ladle, to prevent it ſticking to the bottom of the veſſel.

If a ſtronger ſalt of tartar be required, let the white ſalt be melted in a crucible, with the moſt intenſe degree of heat, and reverberated for ſome hours, till it have acquired a greeniſh or blue colour.

The white and red ſorts of tartar are equally fit for the purpoſe of making fixt ſalt; the only difference is, that the white affords a ſomewhat larger quantity than the other; from ſixteen ounces of this ſort, upwards of four ounces of fixt alkaline ſalt may be obtained. The uſe of the paper is to prevent the ſmaller pieces of the tartar from dropping down into the aſh-hole; through the interſtices of the coals, upon firſt injecting it into the furnace.

The calcination of the ſalt (if the tartar was ſufficiently burnt at firſt) does not increaſe its ſtrength, ſo much as is ſuppoſed: nor is the greeniſh, or blue colour, any certain mark either of its ſtrength, or of its having been long expoſed to a vehement fire: for if the crucible be perfectly clean, cloſe covered, and has ſtood the fire without cracking, the ſalt will turn out white, though kept melted and reverberated ever ſo long; whilſt, on the other hand, a ſlight crack happening in the crucible, or a ſpark of coal falling in, ſhall in a few minutes give the ſalt the colour admired. The colour, in effect, is a mark rather of its containing ſome inflammable matter, than of its ſtrength.

This ſalt has a pungent fiery taſte; and occaſions in the mouth a kind of urinous flavour, probably from a reſolution which it produces in the ſaliva. It readily diſſolves in water, and deliquiates in the air, but is not acted upon by pure vinous ſpirits. Inſtead of being diſſolved by vinous ſpirits, if a ſaturated ſolution of it in water be dropt into the pure ſpirit, it will not mix therewith, but fall diſtinct to the bottom; if water be mixed with the ſpirit, the addition of fixt alkaline ſalt will imbibe the water, and form with it, as in the other caſe, a diſtinct fluid at the bottom. This property affords a commodious method of dephlegmating vinous ſpirits, or ſeparating their watery part, as we have already ſeen.

Salt of tartar, or ſolutions of it in water, raiſe an effervеſcence on the admixture of acid liquors, and deſtroy their acidity, the alkali and acid uniting together into a compound of new qualities, called neutral. Earthy ſubſtances, and moſt metallic bodies, previouſly diſſolved in the acid, are precipitated from it by the alkali. The alkaline ſalt changes the colours of the blue flowers of plants, or their infuſions, to a green. It has the ſame effect on the bright red flowers, and on the colourleſs infuſions of white ones; but in many of the dark red, as thoſe of the wild poppy, and of the yellow ones, it produces no ſuch change.

Solutions of this ſalt liquefy all the animal juices, except milk: corrode the fleſhy parts into a kind of mucous matter; concrete with animal fats, and vegetable oils, into ſoap; and diſſolve ſulphur into a red liquor; eſpecially if aſſiſted by a boiling heat, and mingled with quicklime, which greatly promotes their activity. On pure earths and ſtones, theſe liquors have no ſenſible action; but if the earth or ſtones be mixed with four or five times the weight of the dry ſalt, and urged with a ſtrong fire, they melt along with it, and become afterwards perfectly ſoluble both in water and by the moiſture of the air. With a ſmaller proportion of the ſalt, as an equal weight, they run into an indiſſoluble glaſſy matter.

The medical virtues of this ſalt are, to attenuate the juices, reſolve obſtructions, and promote the natural ſecretions. A dilute ſolution of it, drunk warm in bed, generally excites ſweat. If that evacuation be not favoured, its ſenſible operation is by urine. It is an excellent remedy in coſtive habits, eſpecially if a few grains of aloes be occaſionally interpoſed; with this advantage above other purgatives and laxatives, that when the complaint is once removed, it is not apt to return. Where acidities abound in the firſt paſſages, this ſalt abſorbs the acid, and unites with it, into a mild aperient neutral ſalt. As one of its principal operations is to render the animal fluids more thin, it is obvious, that where they are already colliquated, as in ſcurvies, and in all putrid diſorders in general, this medicine is improper. The common doſe of the ſalt is from two or three grains to a ſcruple; in ſome circumſtances it has been extended to a dram, in which caſe it muſt always be largely diluted with watery liquors.

SAL ABSINTHII.

Salt of wormwood.

Edinb.

Let any quantity of wormwood, either freſh gathered or moderately dried, be put into an iron pan, and with a gentle fire, reduced into white aſhes. Boil theſe with a ſufficient quantity of ſpring water, filter the liquor, and evaporate it till a dry ſalt be left behind. This proves of a brown colour: by repeated ſolution, filtration, and inſpiſſation, it becomes at length pure and white.

It is generally expected of a brown colour in the ſhops, and diſtinguiſhed by this mark from the purer alkali of tartar. If required to be white, the means above recommended will ſcarcely render it ſo; the remains of the oil of the plant, on which the brown colour depends, not being effectually ſeparable without ſtrong calcination. If the aſhes have been fully calcined before the affuſion of water, the ſalt will turn out white at once.

Lond.

Let the aſhes of wormwood [with which the ſhops are uſually ſupplied from the country] be put into an iron pot, or any other convenient veſſel, and kept red-hot over the fire for ſome hours, often ſtirring them that what oily matter remains may be burnt out; then boil the aſhes in water, filter the ley through paper, and evaporate it till a dry ſalt remains; which is to be kept in a veſſel cloſe ſtopt.

After the ſame manner a fixt alkaline ſalt may be prepared from all thoſe vegetables which yield this kind of ſalt [*L.*] as beanſtalks, broom, &c. [*E.*]

These ſalts are obtained to greater advantage from dry plants than from green ones; they muſt not however be too dry or too old; for in ſuch caſe they afford but a ſmall quantity of ſalt. The fire ſhould be ſo managed, as that the ſubject may burn freely, yet not burſt into violent flame. This laſt circumſtance would greatly leſſen the yield of the ſalt; and a very cloſe ſmothering heat would have this effect in a greater degree. Hence the aſhes of charcoal ſcarce yield any ſalt, whilſt the wood it was made from, if burnt at firſt in the open air, affords a large quantity.

If the aſhes be not calcined after the burning, a conſiderable portion of the oil of the ſubject remains in them unconſumed: and hence the ſalt turns out impure, of a brown colour, and ſomewhat ſaponaceous. Tacheneus, Boerhaave, and others, have entertained a very high opinion of theſe oily ſalts, and endeavour as much as poſſible to retain the oil in them. They are nevertheleſs liable to a great inconvenience, uncertainty in point of ſtrength, without promiſing any advantage to counterbalance it. If the common alkalies be required to be made milder and leſs acrimonious (which is the only point aimed at in the making of theſe medicated ſalts, as they are called) they may be occaſionally rendered ſo by ſuitable additions. Pure alkalies, united with a certain quantity of expreſſed oil, compoſe (as we ſhall ſee hereafter) a perfect ſoap, in which the pungent taſte of the alkaline ſalt is totally ſuppreſſed. It is obvious, therefore, that on the ſame principle the pungency may be covered in part, and this proportionably to the quantity of oily matter combined. But we may obtain more elegantly, by a proceſs deſcribed in page 427 (under the title of *Sal alkalinus ſalis marini*) a perfectly pure white alkaline ſalt, of all the mildneſs that can be wiſhed.

The ſhops were formerly burthened with a great number of theſe ſalts, which are now very judiciouſly rejected; thoſe here retained being abundantly ſufficient to anſwer all the uſeful purpoſes that can be expected from theſe kinds of preparations. All fixt alkaline ſalts, from whatever vegetable they may be obtained (thoſe of certain marine plants excepted, which partake of ſea ſalt or its alkali) are nearly one and the ſame thing, and not diſtinguiſhable from each other, at leaſt in their effect as medicines; and hence the college of London, in moſt of the compoſitions wherein theſe ſorts of ſalts are ingredients, allow any fixt alkaline ſalt to be uſed.

Some differences indeed are obſerved in them as uſually prepared; but theſe depend upon the manner in which the proceſs for obtaining them is conducted, or on ſome ſaline matters of a different kind, which either pre-exiſted in the vegetable, or were produced in the proceſs, remaining mixed with the alkali. A variation in the heat by which the plant is burnt or calcined, occaſions a difference in the acrimony of the produce: the more vehement and laſting the fire (to a certain degree) the more acrid is the ſalt. The circumſtances of uſing the aſhes freſh burnt, or after they have been long expoſed to the air, and of applying the water hot or cold to the aſhes, likewiſe make a conſiderable variation. By long expoſure to the air, even the alkalies that have been made cauſtic by quicklime, loſe all the adventitious acrimony which they had received from that treatment; the chemiſts affirm, that they imbibe alſo from the air, in a length of time, a portion of vitriolic acid, by which a part of them is converted into a neutral ſalt, the ſame with the *tartarus vitriolatus* of the ſhops; and it is certain, that ſuch a ſalt is often found among the aſhes of vegetables; though it does not, perhaps, ariſe from that origin. Boiling water takes up this neutral ſalt from the aſhes; whilſt cold water extracts from them only the pure alkaline ſalt, unleſs it be uſed in too large a quantity, or ſuffered to ſtand too long upon them. Boiling water diſſolves alſo more than cold, of the oily parts of the ſubject, if any remained unconſumed.

NITRUM FIXUM.
Fixt nitre.

Take of

Powdered nitre, four ounces;
Charcoal in powder, five drams.

Mix them thoroughly together, by rubbing them in a mortar, and inject the mixture, by a little at a time, into a red-hot crucible. A deflagration, or a bright flame with a hiſſing noiſe, happens on each injection. The whole quantity being thus deflagrated, continue the fire ſtrong for half an hour.

NITRE is compoſed of the common vegetable fixt alkaline ſalt, and a peculiar acid. In this proceſs, the acid is deſtroyed or changed to another nature; and the remaining ſalt proves merely alkaline, not different in quality from the *ſal tartari*, except that a very minute portion of the nitre generally remains unchanged; the ſalt is purified by ſolution in water, filtration, and evaporation. It may be obſerved, that the ſalt receives no ſenſible addition from the vegetable coal employed for the deflagration; for the aſhes of charcoal have very little ſaline matter; and the quantity of charcoal above directed, yields only a grain or two of aſhes.

SAL

SAL ALKALINUS SALIS MARINI.

The alkaline ſalt of ſea ſalt.

Take of
  Cubical nitre (prepared as hereafter deſcribed in ſect. vi. of this chapter) four ounces;
  Charcoal, five drams.
Mix and deflagrate as in the preceding proceſs.

CUBICAL nitre is compoſed of the nitrous acid united with the alkaline baſis of ſea ſalt: the acid being here ſeparated in the deflagration, that alkali remains nearly pure. It poſſeſſes the general properties of the foregoing preparation; changing blue flowers, green; diſſolving oils, ſalts, and ſulphur; bringing earths and ſtones into fuſion, and forming with them, according to its quantity, either a vitreous, or ſoluble compound; efferveſcing with acids, precipitating earths, and metals diſſolved in them, and uniting with the acid into a neutral ſalt. It differs from the foregoing alkalies, in being much milder in taſte; not ſo readily diſſolving in water; not at all deliquiating in the air; eaſily aſſuming, like neutral ſalts, a cryſtalline form; and yielding, with each of the common acids, compounds very ſenſibly different, both in their form and qualities, from thoſe which reſult from the coalition of the vegetable alkalies with the reſpective acids. The cryſtals of this ſalt itſelf are priſmatic, greatly reſembling thoſe of the ſalt called *ſal mirabilis* (See the ſection of neutral ſalts.) Expoſed to a warm air, they fall into a porous, friable maſs, and loſe above two-thirds of their weight

How far this ſalt differs in medical virtue from the other alkalies, is not well known. It apparently poſſeſſes the ſame general virtues; and, as it is far milder, may be given in more conſiderable doſes.

A ſalt of the ſame nature with this, but leſs pure, as containing an admixture of the common vegetable alkali, is prepared at Alicant, and ſome other places, from the aſhes of certain marine plants, called *kali*; which plants are ſuppoſed to have given riſe to the name *alkali*. The ſalt of the kali plants is called *ſoda* or *barigha*: it has been long uſed medicinally in France, and is now introduced into practice in this country; but the above pure alkali extracted from ſea ſalt, is doubtleſs preferable to it.

LIXIVIUM TARTARI [*L.*]
Liquamen ſalis tartari, vulgo Oleum tartari per deliquium [*E.*]

Ley of tartar.

Or oil of tartar per deliquium.

Lond.

Let tartar, calcined to whiteneſs, be ſet in a moiſt place, that it may liquefy.

Edinb.

Put any quantity of ſalt of tartar in a flat glaſs diſh, and expoſe it to the air, for ſome days, in a moiſt place. It will run into a liquor, which is either to be filtered through paper, or ſeparated from the feces by decantation.—The higher the ſalt has been calcined, the more readily will it relent in the air.

THE ſolutions of fixt alkaline ſalts, effected by expoſing them to a moiſt air, are generally looked upon as being purer than thoſe made by applying water directly: for though the ſalt be repeatedly diſſolved in water, filtered and exſiccated; yet, on being liquefied by the humidity of the air, it will ſtill depoſit a portion of earthy matter: but it muſt be obſerved, that the exſiccated ſalt leaves always an earthy matter on being diſſolved in water, as well as on being deliquiated in the air. Whether it leaves more in one circumſtance than in the other, I have not examined. The deliquiated lixivium is ſaid to contain nearly one part of alkaline ſalt to three of an aqueous fluid. It is indifferent, in regard to the lixivium itſelf, whether the white aſhes of tartar, or the ſalt extracted from them be uſed: but, as the aſhes leave a much greater quantity of earth, the ſeparation of the ley proves more troubleſome.

LIXIVIUM SAPONARIUM.

Soap leys.

Lond.

Take of
Ruſſia pot-aſh,
Quicklime, each equal weights.

Gradually ſprinkle on them as much water as will ſlake the lime; then pour on more water, ſtirring the whole together, that the ſalt may be diſſolved: let the ley ſettle, pour it off into another veſſel, and, if there be occaſion, filter it. A wine pint of this ley, meaſured with the greateſt exactneſs, ought to weigh juſt ſixteen ounces troy. If it prove heavier, for every dram that it exceeds this weight, add to each pint of the liquor an ounce and a half of water by meaſure: if lighter, boil it till the like quantity be waſted, or pour it upon freſh lime and aſhes.

Quicklime greatly increaſes the ſtrength of alkaline ſalts; and hence this ley is much more acrimonious, and acts more powerfully as a menſtruum on oils, fats, &c. than a ſolution of the pot-aſh alone. The lime ſhould be uſed freſh from the kiln; by long keeping, even in cloſe veſſels, it loſes much of its ſtrength: ſuch ſhould be made choice of as is thoroughly burnt or calcined, which may be known by its comparative lightneſs.

All the inſtruments employed in this proceſs, ſhould be either of wood, earthen ware, or glaſs. The common metallic ones would be corroded by the ley, ſo as either to diſcolour, or communicate diſagreeable qualities to it. If it ſhould be needful to filter or ſtrain the liquor, care muſt be taken that the filter or ſtrainer muſt be of vegetable matter: woollen, ſilk, and that ſort of filtering paper which is made of animal ſubſtances, are quickly corroded and diſſolved by it.

The liquor is moſt conveniently weighed in a narrow-necked glaſs bottle, of ſuch a ſize, that the meaſure of a wine pint may ariſe ſome height into its neck; the place to which it reaches being marked with a diamond. A pint of the common leys of our ſoft ſoapmakers weighs more than ſixteen ounces. It has been found that their ſoap-ley will be reduced to the ſtandard here propoſed, by mixing it with ſomething leſs than an equal meaſure of water.

LAPIS SEPTICUS, ſeu CAUTERIUM POTENTIALE.

The ſeptic ſtone, or potential cautery.

Edinb.

Take of Pot-aſh,
Quicklime, each equal parts;
Water, three times the weight of both.

Macerate for two days, occaſionally ſtirring them, then filter the ley, and evaporate it to dryneſs. Put the dry maſs into a crucible, and urge it with a ſtrong fire, till it flow like oil: then pour it out upon a flat plate made hot; and, while the matter continues ſoft, cut it into pieces of a proper ſize and figure, which are to be kept in a glaſs veſſel cloſely ſtopt.

This preparation is a ſtrong and ſudden cauſtic. It has an inconvenience of being apt to liquefy too much upon the part to which it is applied, ſo that it is not eaſily confined within the limits in which it is intended to operate: and indeed the ſuddenneſs of its action depends on this diſpoſition to liquefy.

CAUSTICUM COMMUNE FORTIUS.

The ſtronger common cauſtic.

Lond.

Boil any quantity of the ſoap leys before deſcribed, to one-fourth part; then, whilſt it continues boiling, ſome lime, that has been kept for ſeveral months in a glaſs veſſel ſtopt with a cork, is to be ſprinkled in by little and little, till it has abſorbed all the liquor, ſo as to form a kind of paſte; which keep for uſe in a veſſel very cloſely ſtopt.

Here the addition of lime in ſubſtance renders the preparation leſs apt to liquefy than the foregoing, and conſequently more eaſily confinable within the intended limits, but proportionably ſlower in its operation. The deſign of keeping the lime is, that its acrimony may be ſomewhat abated.

It is obſervable, that both theſe cauſtics, and the ſoap leys, that is, alkaline ſalts increaſed in their power by quicklime, do not effervesce or emit air bubbles, at leaſt in any conſiderable degree, on the admixture of acids; though this effervescence has been commonly reckoned one of the principal diſtinguiſhing characters of alkaline ſalts. Expoſed long to the air, they gradually reſume their power of effervescence, and loſe proportionably the additional activity which the quicklime had produced in them.

CAUSTICUM COMMUNE MITIUS.

The milder common cauſtic.

Lond.

Take
Freſh quicklime,
Soft ſoap, of each equal parts.
Mix them well together, at the time of uſing.

This cauſtic, notwithſtanding the lime be uſed freſh, proves much milder than the former; the acrimony of the ſalt being here covered by the oil and tallow, by which it is reduced into ſoap.

SECT. II.

Volatile alkaline Salts.

As fixt alkalies are produced in the burning of vegetables, and remain behind in the aſhes; volatile ones are produced by a like degree of heat from animal ſubſtances, and riſe in diſtillation along with the other volatile principles; the admiſſion of air, neceſſary for the production of the former, is not needful for the latter. Theſe ſalts are obtainable alſo from ſome vegetable matters; and from vegetable and animal ſoot. Though a ſtrong fire be requiſite for their production, yet, when once completely formed, they are diſſipated by the gentleſt warmth: in diſtillation, they riſe ſooner than the moſt highly rectified ſpirit of wine. They are produced in urine, by putrefaction, without fire; and without fire alſo they exhale from it.

SPIRITUS, SAL, et OLEUM CORNU CERVI.

Spirit, ſalt, and oil of hartſhorn.

Lond.

Diſtil pieces of hartſhorn by a fire gradually raiſed almoſt to the higheſt; a ſpirit, ſalt, and oil will aſcend.

If the oil be ſeparated, and the ſpirit and ſalt diſtilled again together, with a very gentle heat, they will both riſe more pure. If this be carefully repeated ſeveral times, the ſalt will become exceedingly white, the ſpirit limpid as water, and of a grateful odour.

The ſalt, ſeparated from the ſpirit, and ſublimed firſt from an equal weight of pure chalk, and afterwards from a little rectified ſpirit of wine, becomes the ſooner pure.

Calcined hartſhorn is generally made by burning the horns left after this diſtillation.

After the ſame manner, a ſpirit, ſalt, and oil, may be obtained from every kind of animal ſubſtance.

Edinb.

Put pieces of hartſhorn into a large iron pot furniſhed with an earthen head; and having fitted on a capacious receiver, and luted the junctures, diſtil in an open fire gradually increaſed. At firſt a phlegm ariſes, then a ſpirit, and afterwards a volatile ſalt, accompanied with an oil. The oil that comes over firſt is of a yellowiſh colour, but, on protracting the diſtillation, there ſucceeds a reddiſh one verging to black. In the bottom of the iron pot there remains a black coal, which, being burnt to whiteneſs in the open air, is called calcined hartſhorn.

Having poured out of the recipient, all the different matters which have come over in it, they may be ſeparated from one another in the following manner. The oil ſeparates from the phlegm and ſpirit in filtration: the two latter will paſs through, and the oil remain on the filter. The phlegm may be ſeparated from the ſpirit by diſtillation in a tall veſſel, with a gentle heat: the ſpirit will come over into the recipient, and the phlegm remain at the bottom of the diſtilling veſſel.

The ſpirit may be divided into a volatile ſalt and phlegm, by diſtilling it in a very tall and narrow cucurbit; the ſalt will ariſe, and adhere to the head in a dry form; the phlegm remaining behind.

The ſalt may be freed from the oil, by ſubliming it from twice its quantity of pot-aſh; for the oil is kept down by the pot-aſh, whilſt the ſalt riſes.

The ſpirit alſo is rendered purer, by adding, to every pint, two ounces of pot-aſh, and diſtilling in a glaſs retort.

The remaining pot-aſh may be again purified for uſe, by calcining it in an open fire, ſo as to burn out the oil it had abſorbed from the ſalt or ſpirit.

A ſpirit, ſalt, and oil, may be obtained in the ſame manner from all the ſolid parts of animals.

The wholeſale dealers have very large pots for the diſtillation of hartſhorn, with earthen heads almoſt like thoſe of the common ſtill. For receivers, they uſe a couple of oil jars, the mouths of which are luted together; the pipe that comes from the head enters the lowermoſt jar, through a hole made on purpoſe in its bottom. When a large quantity of the ſubject is to be diſtilled, it is cuſtomary to continue the operation for ſeveral days ſucceſſively; only unluting the head occaſionally, to put in freſh materials.

When only a ſmall quantity of ſpirit or ſalt is wanted, a common iron pot, ſuch as is uſually fixed in ſand furnaces, may be employed; an iron head being fitted to it. The receiver ought to be large, and a glaſs, or rather tin adopter, inſerted betwixt it and the pipe of the head.

The diſtilling veſſel being charged with pieces of the horn, a moderate fire is applied, which is ſlowly increaſed, and raiſed at length almoſt to the utmoſt degree. At firſt, a phlegmatic liquor ariſes; the quantity of which will be leſs or greater, according as the horns were more or leſs dry: this is ſucceeded by the ſalt and oil. The ſalt at firſt diſſolves, as it comes over, in the phlegm, and thus forms what is called ſpirit. When the phlegm is ſaturated, the remainder of the ſalt concretes in a ſolid form to the ſides of the recipient. If it be required to have the whole of the ſalt ſolid and undiſſolved, the phlegm ſhould be removed as ſoon as the ſalt begins to ariſe, which may be known by the appearance of white fumes: and, that this may be done the more commodiouſly, the receiver ſhould be left unluted, till this firſt part of the proceſs be finiſhed. The white vapours which now ariſe, ſometimes come with ſuch vehemence, as to throw off or burſt the receiver. To prevent this accident, it is convenient to have a ſmall hole in the luting; which may be occaſionally ſtopt with a wooden peg, or opened, as the operator ſhall find proper. After the ſalt has all ariſen, a thick, dark coloured oil comes over: the proceſs is now to be diſcontinued, and the veſſels, when grown cold, unluted.

All the liquid matters being poured out of the receiver, the ſalt which remains adhering to its ſides is to be waſhed out with a little water, and added to the reſt. It is convenient to let the whole ſtand for a few hours, that the oil may the better diſengage itſelf from the liquor, ſo as to be firſt ſeparated by a funnel, and afterwards more perfectly by filtration through wetted paper. The ſalt and ſpirits are then to be further purified, as before directed.

The ſpirit of hartſhorn met with in the ſhops, is extremely precarious in point of ſtrength; the quantity of ſalt contained in it (on which its efficacy depends) varying according as the diſtillation, in rectifying it, is continued for a longer or ſhorter time. If, after the volatile ſalt has ariſen, ſo much of the phlegm or watery part be driven over after it, as is juſt ſufficient to diſſolve it, the ſpirit will be fully ſaturated, and as ſtrong as it can be made. If the proceſs be not at this inſtant ſtopt, the phlegm, continuing to ariſe, muſt render the ſpirit continually weaker and weaker. The diſtillation therefore ought to be diſcontinued at this period, or rather whilſt ſome of the ſalt ſtill remains undiſſolved. The ſpirit will thus prove always equal, and the buyer be furniſhed with a certain criterion of its ſtrength. Very few have taken any notice of the above-mentioned inconvenience of theſe kinds of ſpirits; and the remedy is firſt hinted in the Pharmacopœia Reformata. The purity of the ſpirit is eaſily judged of from its clearneſs and grateful odour.

Volatile alkaline ſalts, and their ſolutions called ſpirits, agree, in many reſpects, with fixt alkalies and their ſolutions or leys; as in changing the colour of blue flowers to a green; effervеſcing with and neutraliſing acids; liquefying the animal juices, and corroding the fleſhy parts, ſo as, when applied to the ſkin, and prevented from exhaling by a proper covering, to act as cauſtics; and diſſolving oils, and ſulphur, though leſs readily than the fixed alkalies, on account, probably, of their not being able to bear any conſiderable heat, by which their activity might be promoted. Their principal difference from the other alkalies ſeems to conſiſt in their volatility. They exhale or emit pungent vapours, in the coldeſt ſtate of the atmoſphere; and by their ſtimulating ſmell they prove ſerviceable in languors and faintings. Taken internally, they diſcover a greater colliquating as well as ſtimulating power; the blood drawn from a vein, after their uſe has been continued for ſome time, being found to be remarkably more fluid than before. They are likewiſe more diſpoſed to operate by perſpiration, and to act on the nervous ſyſtem. They are particularly uſeful in lethargic caſes; in hyſterical and hypochondriacal diſorders, and in the languors, headachs, inflations of the ſtomach, flatulent colics, and other ſymptoms which attend them. They are generally found more ſerviceable to aged perſons, and in phlegmatic habits, than in the oppoſite circumſtances. In ſome fevers, particularly thoſe of the low kind, accompanied with a cough, hoarſeneſs, redundance of phlegm, and ſizineſs of the blood, they are of great utility; liquefying the viſcid juices, raiſing the vis vitæ, and exciting a ſalutary diaphoreſis; but in putrid fevers, ſcurvies, and wherever the maſs of blood be thin and acrimonious, they do harm. As they are more powerful than the fixt ſalts, in liquefying ſizy blood and tenacious humours; ſo they prove more hurtful, where the fluids are already in a colliquated ſtate. In vernal intermittents, particularly thoſe of the ſlow kind, and where the blood is denſe or ſizy, they are often the moſt efficacious remedy. Mr. Biſſet obſerves, in his Eſſay on the medical conſtitution of Great Britain, that, though many caſes occur which will yield to no other medicine than the bark, he has met with many that were only ſuppreſſed from time to time by the bark, but were completely cured by alkaline ſpirits: that theſe ſpirits will often carry off vernal intermittents, without any previous evacuation; but that they are generally more effectual, if a purge be premiſed: and in plethoric or inflammatory caſes, or where the fever perſonates a remittent, veneſection.

Theſe ſalts are moſt commodiouſly taken in a liquid form, largely diluted; or in that of a bolus, which ſhould be made up only as it is wanted. The doſe is from a grain or two to ten or twelve. Ten drops of a well-made ſpirit, or ſaturated ſolution, are reckoned to contain about a grain of the ſalt. In intermittents, fifteen or twenty drops of the ſpirit are given in a tea-cup full of cold ſpring water, and repeated five or ſix times in each intermiſſion.

The volatile ſalts and ſpirits prepared from different animal ſubſtances, have been ſuppoſed capable of producing different effects upon the human body, and to receive ſpecific virtues from the ſubject. The ſalt of vipers has been eſteemed particularly ſerviceable in the diſorders occaſioned by the bite of that animal; and a ſalt drawn from the human ſcull, in diſeaſes of the head. But modern practice acknowledges no ſuch different effects from theſe preparations, and chemical experiments have ſhewn their identity. There is indeed, when not ſufficiently purified, a very perceptible difference in the ſmell, taſte, degree of pungency, and volatility of theſe ſalts; and in this ſtate their medicinal virtues vary conſiderably enough to deſerve notice: but this difference they have in common, according as they are more or leſs loaded with oil, not as they are produced from this or that animal ſubſtance. As firſt diſtilled, they may be looked upon as a kind of volatile ſoap, in which the oil is the prevailing principle; in this ſtate, they have much leſs of the proper alkaline acrimony and pungency, than when they have undergone repeated diſtillations, and ſuch other operations as diſengage the oil from the ſalt; for, by theſe means, they loſe their ſaponaceous quality, and acquiring greater degrees of acrimony, become medicines of a different claſs. Theſe preparations, therefore, do not differ near ſo much from one another, as they do from themſelves in different ſtates of purity. To which may be added, that, when we conſider them as loaded with oil, the virtues of a diſtilled animal oil itſelf are likewiſe to be brought into the account.

Theſe oils, as firſt diſtilled, are highly fetid and offenſive, of an extremely heating quality, and of ſuch activity, that, according to Hoffman's account, half a drop, diſſolved in a dram of ſpirit of wine, is ſufficient to raiſe a copious ſweat. By repeated rectifications they loſe their offenſiveneſs, and at the ſame time become mild in their medicinal operation. The rectified oils may be given to the quantity of twenty or thirty drops, and are ſaid to be anodyne and antiſpaſmodic, to procure a calm ſleep and gentle ſweat, without heating or exagitating the body. It is obvious, therefore, that the ſalts and ſpirits muſt differ, not only according to the quantity of oil they contain, but according to the quality of the oil itſelf in its different ſtates.

The volatile ſalts and ſpirits, as firſt diſtilled, are of a brown colour, and a very offenſive ſmell. By repeated rectification, as directed in the proceſſes above ſet down, they loſe great part of the oil on which theſe qualities depend, the ſalt becomes white, the ſpirit limpid as water, and of a grateful odour; and this is the mark of ſufficient rectification.

It has been objected to the repeated rectification of theſe preparations, that, by ſeparating the oil, it renders them ſimilar to the pure ſalt and ſpirit of ſal ammoniac, which are procurable at an eaſier rate. But this is by no means the caſe. The intention is not to purify them wholly from the oil, but to ſeparate the groſſer part, and to ſubtilize the reſt, ſo as to bring it towards the ſame ſtate as when the oil is rectified by itſelf. I have repeated the rectification of ſpirit of hartſhorn twenty times ſucceſſively, and found it ſtill to participate of oil, but of an oil very different from what it was in the firſt diſtillation.

The rectified oils, in long keeping, become again fetid. The ſalts and ſpirits alſo, however carefully rectified, ſuffer, in length of time, the ſame change, reſuming their original brown colour and ill ſmell;

a proof

a proof that the rectification is far from having diveſted them of oil.

SPIRITUS, SAL, et OLEUM FULIGINIS.

Spirit, ſalt, and oil of ſoot.

Lond.

Diſtil ſoot after the ſame manner as directed before for hartſhorn: but here more labour is required to render the ſpirit and ſalt pure.

The volatile ſalt and ſpirit of ſoot are, when ſufficiently purified, not different in quality from thoſe of animal ſubſtances; though ſome have preferred them in nervous complaints, particularly in epileptic caſes.

SPIRITUS et SAL VOLATILIS SALIS AMMONIACI.

The volatile ſalt and ſpirit of ſal ammoniac.

Lond.

Take a pound and a half of any fixt alkaline ſalt, a pound of ſal ammoniac, and four pints of water. Diſtil off, with a gentle heat, two pints of ſpirit.

The volatile ſalt is made from a pound of ſal ammoniac mixed with two pounds of pure chalk, and ſet to ſublime in a retort, with a ſtrong fire.

Edinb.

Take equal parts of ſal ammoniac and ſalt of tartar: grind them ſeparately to powder, then mix, and put them into a glaſs retort, pouring on gradually as much water as will diſſolve the ſalts. Diſtil, with a gradual fire, in a ſand-bath: the ſalt riſes firſt, and concretes in the receiver. If the ſalt be wanted in a dry form, remove the receiver, before any water come over. If a ſpirit be wanted, continue the diſtillation, till ſo much water have ariſen as is ſufficient to diſſolve the ſalt, taking care to protract it no longer.

Sal ammoniac is a neutral ſalt, compoſed of volatile alkali and marine acid. In theſe proceſſes, the acid is abſorbed by the fixt alkali or chalk; and the volatile alkali is of courſe ſet at liberty.

The fixt alkali begins to act upon the ſal ammoniac, and extricates a pungent urinous odour, as ſoon as they are mixed. Hence it is moſt convenient not to mix them till put into the diſtilling veſſel: the two ſalts may be diſſolved ſeparately in water, the ſolutions poured into a retort, and a receiver immediately fitted on. An equal weight of the fixt ſalt is fully, perhaps more than, ſufficient, to extricate all the volatile.

Chalk does not begin to act upon the ſal ammoniac, till a conſiderable heat be applied. Hence theſe may be without inconvenience, and indeed ought to be, thoroughly mixed together, before they are put into the retort. The ſurface of the mixture may be covered with a little more powdered chalk, to prevent ſuch particles of the ſal ammoniac, as may happen to lie uppermoſt, from ſubliming unchanged. Though the fire muſt here be much greater than when fixt alkaline ſalt is uſed, it muſt not be too ſtrong, nor too ſuddenly raiſed; for, if it be a part of the chalk (though of itſelf not capable of being elevated by any degree of heat) it will be carried up along with the volatile ſalt. M. du Hamel experienced the juſtneſs of this obſervation: he relates, in the Memoirs of the French academy of ſciences for the year 1735, that he frequently found his volatile ſalt, when a very ſtrong fire was made uſe of in the ſublimation, amount to more, ſometimes one half more, than the weight of the crude ſal ammoniac employed; and that, though it be certain that not three-fourths of this concrete are pure volatile ſalt, the fixt earthy matter, thus once volatilized by the alkali, aroſe along with it again upon the gentleſt reſublimation, diſſolved with it in water, and exhaled with it in the air.

When all the ſalt has ſublimed, and the receiver grown cool, it may be taken off, and luted to another retort charged with freſh materials. This proceſs may be repeated, till the recipient appear lined with volatile ſalt to a conſiderable thickneſs. The veſſel muſt then be broken in order to get out the ſalt.

The volatile ſalt and ſpirit of ſal ammoniac are the pureſt of all the medicines of this kind. They are ſomewhat more acrimonious than thoſe produced directly from animal ſubſtances, which always contain a portion of the oil of the ſubject, and receive thence ſome degree of a ſaponaceous quality. Theſe laſt may be reduced to the ſame degree of purity, by combining them with acids into ammoniacal ſalts; and afterwards recovering the volatile alkali from theſe compounds by the proceſſes before directed.

The matter which remains in the retort, after the diſtillation of the ſpirit, and ſublimation of the ſalt, of ſal ammoniac, is found to conſiſt of marine acid united with the fixt alkali or chalk employed. When fixt alkaline ſalt has been uſed as the intermedium, the reſiduum, or caput mortuum, as it is called, yields, on ſolution and cryſtallization, a ſalt exactly ſimilar to the *ſpiritus ſalis marini coagulatus* hereafter deſcribed; and hence we may judge of the extraordinary virtues formerly attributed to this ſalt, under the names of *ſal antihyſtericum, antihypochondriacum, febrifugum, digeſtivum ſylvii,* &c.

The caput mortuum of the volatile ſalt, where chalk is employed as an intermedium, expoſed to a moiſt air, runs into a pungent liquor, which proves nearly the ſame with a ſolution of chalk made directly in the marine acid. It is called by ſome, *oleum cretæ.* oil of chalk. If calcined ſhells or other animal limes be mingled with ſal ammoniac, a maſs will be obtained, which likewiſe runs in the air, and forms a liquor of the ſame kind. This liquor ſeems to be the ſecret of ſome pretenders to a diſſolvent of the calculus.

SPIRITUS VOLATILIS CAUSTICUS.

Volatile cauſtic ſpirit.

Take of ſal ammoniac, one pound;
Quicklime, a pound and a half;
Water, four pints.

Quench the lime in the water; and, having put this mixture into a retort, add to it the powdered ſalt. Immediately adapt a recipient, and with a very gentle heat draw off two pints.

THIS ſpirit is commonly called, from the intermedium, *ſpirit of ſal ammoniac with quicklime.* The effect of the quicklime on the ſal ammoniac, is very different from that of the chalk and fixt alkali in the foregoing proceſs. Immediately on mixture, a very penetrating vapour exhales; and, in diſtillation, the whole of the volatile ſalt ariſes in a liquid form; no part of it appearing in a concrete ſtate, how gently ſoever the liquor be rediſtilled. This ſpirit is far more pungent than the other, both in ſmell and taſte; and, like fixt alkalies rendered cauſtic by the ſame intermedium, it raiſes no efferveſcence on the admixture of acids.

This ſpirit is held too acrimonious for internal uſe, and has therefore been chiefly employed for ſmelling to in faintings, &c. though, when properly diluted, it may be given inwardly with ſafety. It is an excellent menſtruum for ſome vegetable ſubſtances, as Peruvian bark, from which the other ſpirit extracts little.

Some have mixed a quantity of this with the officinal ſpirits both of ſal ammoniac and of hartſhorn: which thus become more pungent, ſo as to bear an addition of a conſiderable quantity of water, without any danger of diſcovery from the taſte or ſmell. This abuſe would be prevented, if what has been formerly laid down as a mark of the ſtrength of theſe ſpirits (ſome of the volatile ſalt remaining undiſſolved in them) were complied with. It may be detected by adding to a little of the ſuſpected ſpirit about one-fourth its quantity or more of rectified ſpirit of wine; which, if the volatile ſpirit be genuine, will precipitate a part of its volatile ſalt, but occaſions no viſible ſeparation or change in the cauſtic ſpirit, or in thoſe which are ſophiſticated with it.

Others have ſubſtituted for the ſpirit of ſal ammoniac, a ſolution of crude ſal ammoniac and fixt alkaline ſalt mixed together. This mixture depoſits a ſaline matter on the addition of ſpirit of wine, like the genuine ſpirit; from which however it may be diſtinguiſhed, as the ſalt, thus ſeparated, is not a volatile alkaline, but a fixt neutral ſalt. The abuſe may be more readily detected by a drop or two of ſolution of ſilver made in aqua-fortis; which will produce no change in the appearance of the true ſpirit, but will render the counterfeit turbid and milky.

SECT. III.

Combination of Alkalies with Oils and inflammable Spirits.

SAPO AMYGDALINUS.

Almond ſoap.

Lond.

TAKE any quantity of freſh-drawn oil of almonds, and thrice its quantity by meaſure of the foregoing ſoap leys. Digeſt them together in ſuch a heat, that they may but juſt boil or ſimmer, and in a few hours they will unite: after which, the liquor in boiling will ſoon become ropy, and in good meaſure tranſparent: a little of it ſuffered to cool, will appear like jelly. When this happens, throw in by little and little ſome common ſalt, till the boiling liquor loſe its ropineſs; and continue the coction, till, on receiving ſome drops on a tile, the ſoap is found to coagulate, and the water freely ſeparates from it. The fire being then removed, the ſoap will gradually riſe to the ſurface of the liquor. Take it off before it grows cold, and put it into a wooden mould or frame, which has a cloth for its bottom: afterwards take out the ſoap, and ſet it by till ſufficiently dried.

After the ſame manner, a ſoap may likewiſe be made with oil olive; but the pureſt oil muſt be uſed, that the ſoap may be as little ungrateful as poſſible either to the palate or ſtomach.

THIS proceſs is ſo fully deſcribed, as to render any further directions unneceſſary. The general virtues of ſoaps have been already delivered. That prepared after this manner is not different in quality from the hard ſort before mentioned. The ſtrength of ſoaps varies conſiderably with their age, and the manner in which they have been kept. Freſh ſoap, though apparently of a good conſiſtence, loſes, upon being thoroughly dried, near one-third of its weight; the whole of which loſs is mere water; a circumſtance to be particularly attended to, in the exhibition of this medicine.

Soap is decompounded (or the alkaline ſalt and oil, of which it is compoſed, ſeparated from one another) by all acids; and hence it does not lather with waters that contain any acid unneutralized. In pure water, it diſſolves into a milky liquor, which, on dropping in ſome oil of vitriol, forms a kind of coagulum. On adding more of the acid, the liquor becomes clear, the oil of the ſoap riſes to the ſurface, its alkali uniting with the acid, and forming ſaline concretions at the bottom. The oil, carefully collected, proves remarkably purer than when it firſt entered the compoſition of the ſoap; and, like the eſſential oils of vegetables, diſſolves in ſpirit of wine: it may poſſibly be applicable to ſome uſeful purpoſes, as it ſeems to be freed from its groſſer matter, extremely pure, and is void of the pungency of eſſential oils.

It follows from the above experiments, that no kind of acid ought to be uſed along with ſoap; all acids abſorbing the alkaline ſalt of the ſoap from the oil. Neutral ſalts have not this effect, their acid being already ſatiated with an alkali: but ſalts compoſed of an acid and an earthy or metallic body, as the purging bitter ſalt, vitriol, &c. decompound the ſoap equally with pure acids; acids quitting an earth or metal, to unite with an alkali brought in contact with them.

Soap diſſolves likewiſe, but in ſmall quantity, in pure ſpirit of wine: it is obſervable of this ſolution, that, if expoſed to a degree of cold, a very little greater than that in which water begins to freeze, it congeals into a ſolid pellucid maſs.

The menſtruum which diſſolves ſoap moſt perfectly, and in greateſt quantity, is a pure proof ſpirit. The common proof ſpirits have a ſlight acidity, not indeed diſtinguiſhable by the taſte or by the uſual ways of trial, but ſufficient to give ſomewhat of a milky hue to ſolutions of ſoap made in them. This may be corrected by the addition of a little alkaline ſalt. Mr. Geoffroy obſerves, in the Memoirs of the French academy, that twenty-eight parts of good proof ſpirit, with the addition of one part of ſalt of kali, will diſſolve ten parts of good hard ſoap into a perfectly limpid liquor. The common alkaline ſalts, as that of tartar, anſwer equally in this reſpect with that of kali; but the latter, being much leſs acrimonious, ſeems preferable, where the ſolution is intended for medicinal uſe.

This facility of the decompoſition of ſoap by acids, renders it an uſeful criterion of low degrees, of unneutralized acidity in waters, &c. The limpid ſolution of ſoap in proof ſpirit, dropt into any liquor that contains either a pure acid, or a ſalt compoſed of an acid, with an earth or metal, renders the liquor immediately milky, more or leſs, in proportion to the quantities with which it is impregnated.

SAPO PURIFICATUS.

Purified ſoap.

Slice one pound of dry, hard, Genoa,

noa, Alicant, or any other oil-ſoap, into a clean pewter veſſel, and pour upon it two gallons of rectified ſpirit of wine. Place the veſſel in a water-bath, and apply ſuch a degree of heat as may make the ſpirit boil, when it will ſoon diſſolve the ſoap. Let the veſſel ſtand cloſe covered, in a warm place, till the liquor grow perfectly clear; if any oily matter ſwim upon the ſurface, carefully ſcum it off. Then decant the limpid liquor from the feces, and diſtil off from it all the ſpirit that will ariſe in the heat of a water-bath. Expoſe the remainder to a dry air for a few days, and it will become a white, opake, and ſomewhat friable maſs. *Pract. chem.*

Soap thus purified has little or no ſmell, and proves, upon examination, not in any degree acrimonious, but quite mild and ſoft, and conſequently well fitted for medicinal purpoſes.

Sapo tartareus.
Soap of tartar.

Take any quantity of ſalt of tartar, very well calcined, and reduced into powder whilſt hot. Immediately pour upon it, in a broad glaſs veſſel, twice its quantity of oil of turpentine: and let them ſtand together in a cellar for ſome weeks, till the oil has penetrated the ſalt: then add more oil by degrees, till the ſalt have abſorbed thrice its own quantity, and both appear united into a ſoap; which, if the matter be every day ſtirred, will happen in a month or two. The effect ſucceeds ſooner, if the containing veſſel be fixed to the ſail of a windmill, or any other machine that turns round with great velocity.

This tedious proceſs, which is taken from a former edition of the Edinburgh pharmacopœia, might be finiſhed in a very little time, by duly attending to a circumſtance which our chemiſts, and the pharmaceutical writers, have in general overlooked; and which many have ſuppoſed to be a means even of preventing ſucceſs. If the oil be poured upon the pulverized ſalt whilſt very hot, they will immediately unite, with a hiſſing noiſe; and, by rubbing for a few minutes in a hot mortar, form a truly ſaponaceous maſs, the medicine here intended. If the ſalt be ſuffered to grow cold before the addition of the oil, it is ſcarce poſſible to unite them, as the committee of the London college obſerves, without the addition of a little water, which in this caſe promotes the effect. The regular, uniform motion above recommended, does not anſwer ſo well as agitation or rubbing in a mortar; the different degrees of centrifugal force which the oil and ſalt acquire when moved circularly, tending to keep them apart. The ſalt does not retain ſo much of the oil as might be expected; far the greateſt part of this volatile fluid being diſſipated in the proceſs. Mr. Baumé relates, in his *Manuel de chemie*, that experiments have convinced him the ſoap conſiſts of only the reſinous part of the oil united with the alkali; that the more fluid and well rectified the oil is, the leſs ſoap is obtained; and that, by adding a little turpentine in ſubſtance to the mixture, the preparation is conſiderably accelerated.

This medicine has been greatly celebrated as a diuretic, in nephritic complaints, and as a corrector of certain vegetable ſubſtances, particularly opium; it was for ſome time a great ſecret in the hands of its firſt preparer, Starkey, under the names of philoſophic ſoap, the vegetable corrector, &c. Its virtues, however, have not been ſufficiently warranted by experience; nor does the preſent practice pay any regard to it. Accordingly both the London and Edinburgh colleges have rejected it at a late reformation of their pharmacopœias.

LOTIO SAPONACEA.
Saponaceous lotion.
Lond.

Take of
Damaſk roſe water, three quarters of a pint;
Oil olive, one quarter of a pint;
Ley of tartar, half an ounce by meaſure.
Grind the ley of tartar and the oil together, until they unite; then gradually add the roſe water.

This is deſigned for external uſe, as a detergent waſh; and, like other ſoapy liquors, anſwers this purpoſe very effectually. Where it is required to be more deterſive, it may be occaſionally rendered ſo, by the addition of a ſmall quantity of a ſolution of any fixt alkaline ſalt.

LINIMENTUM SAPONACEUM.
Saponaceous liniment.

Take of
Spirit of roſemary, one pint;
Hard Spaniſh ſoap, three ounces;
Camphor, one ounce.
Digeſt the ſoap in the ſpirit of roſemary, until it is diſſolved; then add the camphor.

BALSAMUM SAPONACEUM, vulgo OPPODELDOCH.
Saponaceous balſam, commonly called opodeldoc.
Edinb.

Take of
Spaniſh ſoap, ten ounces;
Camphor, two ounces;
Eſſential oil of roſemary,
Eſſential oil of origanum, each half an ounce;
Rectified ſpirit of wine, four pints.
Digeſt the ſoap in the ſpirit of wine, with a gentle heat, till it be diſſolved; then add the camphor and the oils, and ſhake the whole well together, that they may be perfectly mixed.

These compoſitions alſo are employed chiefly for external purpoſes, againſt rheumatic pains, ſprains, bruiſes, and other like complaints. Soap acts to much better advantage, when thus applied in a liquid form, than in the ſolid one of a plaſter.

BALSAMUM ANODYNUM, vulgo BATEANUM.
Anodyne balſam, commonly called Bates's balſam.
Edinb.

Take of
White ſoap, two ounces;
Crude opium, half an ounce;
Camphor, ſix drams;
Eſſential oil of roſemary, one dram;
Rectified ſpirit of wine, eighteen ounces.
Digeſt the ſpirit with the ſoap and opium, in a gentle ſand-heat, for three days: then ſtrain the liquor, and add to it the camphor and eſſential oil.

This compoſition is greatly commended for allaying pains, and is ſaid to have been ſometimes uſed with benefit even in the gout; a cloth dipt in it being laid on the part. It is ſometimes likewiſe directed to be taken inwardly, in the ſame diſorder, as alſo in nervous colics, jaundices, &c. from twenty to fifty drops or more; though ſurely, in gouty caſes, the uſe of opiate medicines requires great caution. One grain of opium is contained in about ninety drops of the balſam.

LINIMENTUM VOLATILE.
Volatile liniment.
Lond.

Take of
- Oil of almonds, one ounce by meaſure;
- Spirit of ſal ammoniac, two drams by weight.

Stir them together in a wide-mouthed phial, until they perfectly unite.

EPITHEMA VOLATILE.
Volatile epithem.
Lond.

Take of
- Common turpentine,
- Spirit of ſal ammoniac, each equal weights.

Stir the turpentine in a mortar, gradually dropping in the ſpirit, until they unite into a white maſs.

EMPLASTRUM VOLATILE.
Volatile plaſter.
Edinb.

Take of
- Venice turpentine,
- Spirit of Sal ammoniac, each one ounce.

Pour the ſpirit gradually into the turpentine, ſtirring them diligently together in a mortar.

The three foregoing are very acrid, ſtimulating compoſitions, and are principally applied againſt rheumatic and iſchiadic pains. The epithem or plaſter was formerly made of a ſtiffer conſiſtence, and more adheſive, by an addition of tacamahaca; which is here judiciouſly omitted, ſince it prevented the application from being ſo expeditiouſly got off from the part, as its great irritating power made ſometimes neceſſary.

SPIRITUS SALIS AMMONIACI DULCIS.
Dulcified ſpirit of ſal ammoniac.
Lond.

Take half a pound of any fixt alkaline ſalt, four ounces of ſal ammoniac, and three pints of proof ſpirit of wine. Diſtil off, with a gentle heat, a pint and a half.

This ſpirit has come much into eſteem, both as a medicine and a menſtruum. It is a ſolution of volatile ſalt in rectified ſpirit of wine; for though proof ſpirit be made uſe of, its phlegmatic part does not ariſe in the diſtillation, and ſerves only to facilitate the action of the pure ſpirit upon the ammoniacal ſalt. Rectified ſpirit of wine does not diſſolve volatile alkaline ſalts by ſimple mixture: on the contrary, it precipitates them, as has been already obſerved, when they are previouſly diſſolved in water: but by the preſent proceſs, a conſiderable proportion of the volatile alkali is combined with the ſpirit. It might perhaps, for ſome purpoſes, be more adviſable, to uſe in this intention the volatile ſpirit made with quicklime: for this may be mixed at once with rectified ſpirit of wine, in any proportions, without the leaſt danger of any ſeparation of the volatile alkali.

SPIRITUS VOLATILIS FŒTIDUS.
The volatile fetid ſpirit.
Lond.

Take of
- Any fixt alkaline ſalt, a pound and a half;
- Sal ammoniac, one pound;

Aſafœtida, four ounces;
Proof ſpirit of wine, ſix pints.
Draw off, with a gentle heat, five pints.

This ſpirit is deſigned as an antihyſteric, and is undoubtedly a very elegant one. Volatile ſpirits, impregnated for theſe purpoſes with different fetids, have been uſually kept in the ſhops. The ingredient here made choice of, is the beſt calculated of any for general uſe, and equivalent in virtue to them all. The ſpirit is pale when newly diſtilled, but acquires a conſiderable tinge in keeping.

SPIRITUS VOLATILIS AROMATICUS.

Volatile aromatic ſpirit.

Lond.

Take of
- Eſſential oil of nutmegs,
- Eſſence of lemons, each two drams;
- Eſſential oil of cloves, half a dram;
- Dulcified ſpirit of ſal ammoniac, one quart.

Diſtil them with a very gentle fire.

SPIRITUS VOLATILIS OLEOSUS, vulgo SALINUS AROMATICUS.

Volatile oily ſpirit, commonly called ſaline aromatic ſpirit.

Edinb.

Take of
- Dulcified ſpirit of ſal ammoniac, eight ounces;
- Eſſential oil of roſemary, one dram and an half;
- Eſſence of lemon-peel, one dram.

Mix them together, that the oils may be diſſolved.

Volatile ſalts, thus united with aromatics, are not only more agreeable in flavour, but likewiſe more acceptable to the ſtomach, and leſs acrimonious, than in their pure ſtate. Both the foregoing compoſitions turn out excellent ones, provided the oils be good, and the diſtillation ſkilfully performed. The doſe is from five or ſix drops to ſixty or more.

Medicines of this kind might be prepared extemporaneouſly, by dropping any proper eſſential oil into the dulcified ſpirit of ſal ammoniac, which will readily diſſolve the oil without the aſſiſtance of diſtillation, as in the following compoſitions; in which Jamaica pepper is choſen for the aromatic material, as being a cheap and ſufficiently elegant one, and very well adapted to general uſe.

SPIRITUS VOLATILIS OLEOSUS EXTEMPORANEUS.

Extemporaneous volatile oily ſpirit.

Take of
- Dulcified ſpirit of ſal ammoniac, one pint;
- Eſſential oil of Jamaica pepper, two drams.

Mix them together, that the oil may be diſſolved.

Or,

Take of
- Spirit of wine, highly rectified,
- Spirit of ſal ammoniac, each half a pint;
- Eſſential oil of Jamaica pepper, two drams.

Diſſolve the oil in the ſpirit of wine, and mix this ſolution with the ſpirit of ſal ammoniac: a white coagulum will be immediately formed, which, in a warm place, ſoon reſolves into a tranſparent liquor, depoſiting a quantity of a volatile oily ſalt.

By either of theſe methods, a volatile oily ſpirit may be made occaſionally, and adapted, at pleaſure, to particular purpoſes, by chuſing an eſſential oil proper for the intention. Thus in hyſterical diſorders, where the uterine purgations are deficient, a preparation of this kind made with the oils of rue, ſavin, penny-royal, or ſimilar plants, proves an uſeful remedy: for weakneſs of the ſtomach, oil of mint may be taken; where a cephalic is required, oil of majoram, lavender, or roſemary; in coldneſs and faintings, oil of cinnamon; in caſes of flatulencies, the oils of aniſeeds and ſweet fennel ſeeds. Theſe laſt greatly cover the pungency of the volatile ſpirit, and render it ſupportable to the palate. The ſpirits thus made by ſimple mixture, are no wiſe inferior, in medicinal efficacy, to thoſe prepared by diſtillation, though the tinge, which they receive from the oil, may render them to ſome perſons leſs ſightly.

SPIRITIS VOLATILIS SUCCINATUS.

Succinated volatile ſpirit.

Take of
- Rectified oil of amber, from twelve to ſixty drops;
- Rectified ſpirit of wine, one ounce;
- Volatile ſpirit of ſal ammoniac prepared with quicklime, twelve ounces.

Mix them together, and diſtil in a retort with a moderate fire.

This compoſition is extremely penetrating, and has come into eſteem, particularly for ſmelling to in lowneſſes and faintings, under the name of *Eau de luce*. It has been hitherto brought from France. It is not quite limpid, for the oil of amber diſſolves only imperfectly in the ſpirit. If the volatile ſpirit be not exceedingly ſtrong, ſcarcely any of the oil will be imbibed.

SECT. IV.

Acid Spirits.

SPIRITUS VITRIOLI tenuis, et fortis (oleum dictus *E.*) atque COLCOTHAR.

Weak ſpirit, and ſtrong ſpirit or oil, of vitriol, and colcothar.

Lond.

Let calcined vitriol be diſtilled in earthen veſſels, with a reverberatory fire, for three days without intermiſſion. What remains in the veſſels is called colcothar of vitriol.

Put the diſtilled liquor into a glaſs retort, and place it in a ſand furnace. The weak ſpirit will come over, the ſtrong (improperly called oil of vitriol) remaining behind.

Edinb.

Take any quantity of green vitriol, calcined to a ſlight yellow colour, and reduced into powder. Fill therewith one half of an earthen retort, place it in a reverberatory furnace, fit on a very large receiver, and lute well the junctures. Then proceed to diſtillation, gradually increaſing the fire to the utmoſt degree, which is to be kept up as long as any vapours ariſe.

The phlegm, ſpirit, and oil improperly ſo called, may be ſeparated from each other, by committing the whole to diſtillation in a retort placed in a ſand furnace.

The phlegm (which will be in little quantity if the vitriol have been duly calcined) will ariſe with a ſmall degree of heat, and the ſpirit with a ſtronger, leaving the oil behind.

THE vitriol ſhould be calcined till it acquire a yellowiſh colour inclining to red. If calcined only to whiteneſs, as has been commonly directed, it will change in the diſtilling veſſels into a hard compact maſs, from which the due quantity of acid can never be obtained, though urged with the moſt vehement fire for a great length of time. A retort is an inconvenient inſtrument for performing the diſtillation. It requires an extraordinary expence of fuel and time to elevate the ponderous acid of vitriol, ſo high as the figure of this veſſel demands. The veſſels uſually employed are ſo contrived, that the vapour paſſes out laterally, without any aſcent; theſe are called long-necks: the junctures of them with the receivers may be luted with Windſor loam, moiſtened with a ſolution of any fixt alkaline ſalt, and then beaten up with a ſmall quantity of horſe dung. If the fire be ſufficiently ſtrong, the diſtillation will be finiſhed in much leſs than three days, though vapours will not ceaſe to appear long after this period. When the proceſs has been continued for a certain time, which Boerhaave limits to eighteen hours, the ſpirit that ariſes will not pay the expence. Regard however muſt be had herein to the ſize of the furnace, the quantity of vitriol in each diſtilling veſſel, and the degree of heat employed. Thoſe who make this commodity in quantity, continue the operation no longer than till the fumes which iſſue from the long-necks, at the greateſt diſtance from the fire, begin to leſſen, and the recipients grow ſomewhat clear.

This proceſs is not practicable to advantage without a very large apparatus. Hence it is become a diſtinct branch of the chemical buſineſs; and conſiderable works have been erected for it, in ſuch parts of the kingdom as fuel can be moſt eaſily procured in; ſome of the furnaces are ſo large as to contain a hundred earthen long-necks, or diſtilling veſſels, at once. The metallic part of the vitriol, or colcothar, which remains after the diſtillation, is ground down in mills, edulcorated with water, and employed as a pigment. In medical virtue, it is not different from ſome of the calces of iron, to be ſpoken of hereafter.

The acid ſpirit, as it ariſes in the firſt diſtillation, appears of a dark or blackiſh colour, and contains a conſiderable portion of phlegm. In the ſecond diſtillation, the phlegmatic parts ariſe firſt, together with the lighter acid, which are kept apart, under the name of weak ſpirit. At the ſame time, the remaining ſtrong ſpirit, or oil as it is called, loſes its black colour, and becomes clear; and this is the uſual mark for diſcontinuing the diſtillation. Methods of further purifying this acid for the nicer uſes, are deſcribed in Practical Chemiſtry.

The ſpirit of vitriol is the moſt ponderous of all the liquids we are acquainted with; and the moſt powerful of the acids. If any other acid be united with a fixt alkaline ſalt or earth; upon the addition of the vitriolic, ſuch acid will be diſlodged, and ariſe on applying a moderate heat, leaving the vitriolic in poſſeſſion of the alkali; though without this addition, it would not yield to the moſt vehement fire. Mixt with water, it inſtantly conceives great heat, inſomuch that glaſs veſſels are apt to crack from the mixture, unleſs it be very ſlowly performed. Expoſed to the air, it imbibes moiſture, and ſoon acquires a notable increaſe of weight. In medicine, it is employed chiefly as ſubſervient to other preparations. It is likewiſe not unfrequently mixed with juleps and the like, in ſuch quantity as will be ſufficient to give the liquor an agreeable tartneſs in the intentions of a cooling antiſeptic, reſtrigent, and ſtomachic.

SPIRITUS SULPHURIS per campanam.

Spirit (commonly called Oil) of ſulphur by the bell.

Lond.

Let the ſulphur be ſet on fire, under a glaſs veſſel fitted for this uſe, called a bell: and let the acid ſpirit, which trickles down from the ſides of the bell, be received in a glaſs diſh placed underneath.

Edinb.

Take any quantity of ſulphur; melt it in an earthen diſh, and dip into it twiſted ſtrips of linen, ſo as to form a ſulphurated match. Faſten this in the mouth of a vial, which is to be ſet in the bottom of a glaſs or earthen diſh, in a moiſt place ſcreened from the wind. Then kindle the ſulphur with a red hot iron; and hang over it a glaſs bell, at ſuch a diſtance that the flame may not touch it. The vapour of the ſulphur will condenſe in the bell by the cold, and drop down from its ſides, like water, into the veſſel placed underneath.

The glaſs uſually employed for this purpoſe by the chemiſts differs conſiderably from the bell ſhape. Its belly is ſpherical, and has a rim at the bottom turned inwards a little; the upper part ends in a long open ſtem: a large receiver, with a hole cut in its bottom, and a long tube inſerted into its mouth, would anſwer as well. If the ſulphur happen to burn dull, the glaſs is taken off, and the matter ſtirred with an iron wire, or clean tobacco-pipe: as it conſumes, freſh quantities are ſupplied, till all the ſulphur deſigned for this uſe be burnt. The condenſation of the fumes depends in great meaſure upon their imbibing aqueous moiſture: hence in wet weather, or a damp place, the operation ſucceeds beſt. In dry weather, it is cuſtomary to moiſten the bell, by ſuſpending it for a little time over the ſteam of boiling water.

This proceſs is ſufficiently troubleſome, and the yield of acid ſpirit obtained by it extremely ſmall; greateſt part of the fumes eſcaping into the air, partly at the bottom, and partly through the upper aperture of the bell.

Several contrivances have been made for preventing theſe inconveniences. One of the beſt commonly known, is that deſcribed in vol. 5. art. 14. of the Edinburgh eſſays. Inſtead of the bell, a large retort is employed, having a tubulated receiver (with the pipe turned uppermoſt) adapted to its neck. Inſtead of the large aperture in the bottom of the bell, a ſmall one is made in the bottom of the retort: and thus by diminiſhing the aperture, enlarging the capacity of the veſſels, and lengthening the paſſage of the fume, a conſiderably larger quantity of the fumes are detained than in the common inſtruments.

This apparatus may be greatly improved, by cutting the hole in the ſide of the retort, and pouring into the bottom an ounce or two of warm water, in the middle of which is placed a ſhallow ſtone cup containing the ſulphur. The heat of the burning ſulphur is ſoon communicated to the water, ſo as to keep it continually riſing in ſteam. With this aqueous vapour, the fumes of the brimſtone are effectually blended as they aſcend; and detained in conſiderable quantity, in a much leſs proportion of phlegm than when the common methods are purſued: for here, the buſineſs of rectification or dephlegmation is carrying on, at the ſame time that the acid is collecting.

This affair is capable of being much further improved. In the common method by the bell, in the moſt favourable circumſtances, ſcarce above two drams of acid ſpirit are obtained from ſixteen ounces of ſulphur: by the ſecond apparatus, an ounce may be obtained from the ſame quantity; and by the other, about two ounces. It appears however, from experiments related by Stahl and others, that out of ſixteen ounces of ſulphur, at leaſt fifteen ounces are pure acid, of ſuch ſtrength as to require being diluted with above an equal weight of water, to reduce it to the pitch of common ſpirit of ſulphur. It follows, therefore, that if we could contrive a method of burning ſulphur, ſo as to preſerve all the fumes, we might obtain from it much more than its own weight, of an acid of the ordinary ſtrength.

The acid obtained from ſulphur is in all reſpects ſimilar to that of vitriol. The acid of ſulphur, united with iron or copper, forms a true vitriol; and the acid of vitriol, combined with inflammable matters, produces ſulphur, not diſtinguiſhable from pure common brimſtone. The identity of theſe acids is well known to ſome particular perſons, who ſupply us with almoſt all that is now ſold under the name of oil of vitriol, prepared from the fumes of burning ſulphur. The method by which they obtain the acid ſo plentifully, and at ſo cheap a rate, from this concrete, which has hitherto yielded it ſo ſparingly, differs from the proceſſes above deſcribed. Inſtead of an open bell, or a retort with the mouth open, they uſe, for burning the ſulphur, very large ſpherical glaſs veſſels blown on purpoſe, of the ſize of a hogſhead or more, with only one aperture, through which the ſulphur is introduced, and which is afterwards immediately cloſed, till the fumes have ſubſided and incorporated with the vapour of the warm water placed in the lower part of the veſſel.

AQUA SULPHURATA.

Sulphurated water, uſually called gas ſulphuris.

Lond.

Take a quart of water, and half a pound of ſulphur. Let part of the ſulphur be ſet on fire in an iron ladle, and ſuſpended over the water in a cloſe veſſel. As ſoon as the fumes ſubſide, ſome more of the ſulphur is to be fired in the ſame manner; and this repeated till the whole quantity be burnt.

A convenient way of managing this proceſs is, to put the water into a glaſs receiver, placed on its ſide; and to have the ladle, containing the burned ſulphur, fixed to a plug, made to go freely into the neck of the veſſel. The uſe of the plug is to keep the ladle from dipping into the water. The fumes which iſſue betwixt it and the glaſs may be confined by a cloth thrown round the neck.

The water is impregnated, in this proceſs, with a ſubtile volatile acid, different in many reſpects from the foregoing ſpirits of ſulphur and of vitriol. The acid may likewiſe be obtained in the ſame volatile ſtate, both from vitriol and ſulphur, without water. If the retort or long neck, during the diſtillation of oil of vitriol, happen to crack in the fire, all the acid that riſes afterwards is found to be thus volatilized. If cloths, moiſtened with a ſolution of fixt alkaline ſalt, be ſuſpended over burning brimſtone, the acid fumes will be imbibed by the alkali, and form with it a neutral ſalt. If this neutral ſalt be rubbed off from the cloths, and ſome common oil of vitriol poured upon it, the volatile acid it had imbibed from the ſulphur will be immediately extricated again, and may be collected by diſtillation. The acid proves in all theſe caſes ſo volatile, as to diſtil in a heat ſcarcely greater than that which the hand can ſupport. It has a pungent ſuffocating ſmell, like that of the fumes of burning brimſtone, but diſcovers to the taſte very little acidity or corroſiveneſs. Expoſed for ſome time to the air, it loſes theſe properties, and becomes a fixt acid, and corroſive, like common oil of vitriol.

The *aqua ſulphurata* is liable to great uncertainty in point of ſtrength; partly on account of the water's being impregnated with a greater or leſs quantity of the fumes, according as the proceſs is more or leſs ſkilfully managed; and partly on account of the above change of the acid from a volatile to a fixt ſtate. When newly prepared, it is highly volatile and pungent, ſmelling like burning brimſtone, but in taſte rather bitteriſh and auſtere than acid: in keeping, the volatility and ſmell are loſt, and the liquor (ſooner or later, according as the air is more or leſs admitted to it) becomes in all reſpects the ſame as water acidulated with a little common oil of vitriol.

This preparation is ſaid to give relief in fits of the convulſive aſthma. It is taken to the quantity of a ſpoonful or half an ounce, two or three times a day, in any ſuitable vehicle.

SPIRITUS NITRI Glauberi.

Glauber's ſpirit of nitre.

Lond.

Take three pounds of nitre, and one pound of the ſtrong ſpirit, or oil of vitriol. Mix them cautiouſly and gradually together, under a chimney; and then diſtil, at firſt with a gentle, and afterwards with a ſtronger heat.

Edinb.

Put two pounds of nitre into a glaſs retort; and add by degrees one pound of oil of vitriol diluted with an equal quantity of warm water. Diſtil in a ſand heat, gradually increaſed, till the matter remains dry.

This ſpirit is rectified by a ſecond diſtillation, with the heat of a water-bath, in a glaſs cucurbit, with its head and receiver. The phlegm ariſes, leaving the ſpirit behind.

Here the vitriolic acid expels that of the nitre, in red corroſive vapours, which begin to iſſue immediately upon mixture, and which the operator ought cautiouſly to avoid. A pound of oil of vitriol is ſufficient to expel all the acid from about two pounds of nitre, not from more. Some direct equal parts of the two. The ſpirit, in either caſe, is in quality the ſame; the difference in this reſpect affecting only the reſiduum. When two parts of nitre are taken to one of oil of vitriol, the remaining alkaline baſis of the nitre is completely ſaturated with the vitriolic acid, and the reſult is a neutral ſalt, the ſame with vitriolated tartar; as we ſhall ſee hereafter. If more nitre be uſed, a part of the nitre in ſubſtance will remain blended with this vitriolated ſalt: if leſs nitre, it cannot afford alkali enough to ſaturate the vitriolic acid, and the reſiduum will be not a neutral ſalt, but a very acid one. In this laſt caſe there is one convenience; the acid ſalt being readily diſſoluble in water, ſo as to be got out without breaking the retort, which the others are not.

The acid of nitre is next in ſtrength to the vitriolic, and diſlodges all but that from alkaline ſalts or earths. It differs from all the other acids in deflagrating with inflammable matters. If a ſolution of any inflammable ſubſtance, as hartſhorn, &c. in this acid be ſet to evaporate; as ſoon as the matter approaches to dryneſs, a violent detonation enſues. The chief uſe of this acid is as a menſtruum for certain minerals, and as the baſis of ſome particular preparations; of which hereafter. It has been given likewiſe diluted with any convenient vehicle, as a diuretic, from ten to fifty drops.

SPIRITUS SALIS MARINI Glauberi.

Glauber's ſpirit of ſea ſalt.

Lond.

Take two pounds of ſea ſalt, and the ſame quantity of ſtrong ſpirit or oil of vitriol. Dilute the acid ſpirit with a pint of water, and pour this mixture, by little and little, on the ſalt under a chimney; then diſtil, at firſt with a gentle, and afterwards with a ſtronger fire.

Edinb.

Put into a glaſs retort two pounds of ſea ſalt decrepitated (that is, dried over the fire till it ceaſes to crackle), and pour thereon, by little and little, one pound of oil of vitriol diluted with an equal quantity of warm water. Place the retort in ſand; and, with a fire gradually increaſed, diſtil to dryneſs. This ſpirit is rectified by a ſecond diſtillation, in a glaſs cucurbit, with a head and receiver adapted to it; by the heat of a water-bath the phlegm will ariſe, leaving the ſpirit behind.

The marine acid ariſes, not in red fumes like the nitrous, but in white ones. The addition of water is more neceſſary here than in the foregoing proceſs. The marine vapours being ſo volatile, as ſcarce to condenſe without ſome adventitious humidity; and hence the rectification, directed in the ſecond proceſs, does not ſucceed ſo well as that of the nitrous acid, a part of the marine ſpirit ariſing along with the phlegm. The oil of vitriol is moſt conveniently mixed with the water in an earthen or ſtone-ware veſſel: for unleſs the mixture be made very ſlowly, it grows ſo hot as to endanger breaking a glaſs one.

The ſpirit of ſea ſalt is the weakeſt of the mineral acids, but ſtronger than any of the vegetable. It requires a greater fire to diſtil it than that of nitre, yet is more readily diſſipated by the action of the air. It is uſed chiefly as a menſtruum for the making of other preparations. Sometimes likewiſe it is given, properly diluted, as an antiphlogiſtic, aperient, and diuretic, from ten to ſixty or ſeventy drops.

SPIRITUS SALIS.

Spirit of ſalt.

Take a pound of ſea ſalt thoroughly dried, and three pounds of powdered bricks. Mix, and put them into an earthen retort, of ſuch a ſize that theſe may fill only one half of it. Place the retort in a reverberatory furnace, adapt to it a large receiver, and lute well the junctures. Let the fire be applied at firſt very ſparingly, and afterwards increaſed by degrees, until all the ſpirits be driven over in the form of clouds. When the veſſels are grown cold, pour out the diſtilled liquor into a glaſs cucurbit, and gently abſtract from it the phlegm, which will leave the ſpirit pure.

INSTEAD of brickduſt, ſome have uſed bolar earths and clays. It has been ſuppoſed, that theſe ſubſtances act by diſcontinuing and dividing the particles of the ſalt, ſo as to enable the fire to expel the ſpirit. If this were true, glaſs or ſand would prove equally ſerviceable, and the ſame intermedium would anſwer as well for a number of times as at firſt; the reverſe of which, experiments ſhew to be true. Brick-earth, and other ſubſtances of this kind, contain a ſmall quantity of vitriolic acid, whoſe known property it is to diſengage the acid of ſea ſalt, and which is the only part of them of uſe in this proceſs. The quantity of ſpirit, therefore, obtained by theſe intermedia, is only in proportion to that of the acid contained in them, which is extremely ſmall. This has occaſioned ſome to make uſe of vitriol, as containing a larger quantity of the vitriolic acid. But, though vitriol be in this reſpect greatly preferable to brickduſt, or the argillaceous earths; yet, in another, it is found leſs eligible. Its metallic part ſo ſtrongly adheres to the marine acid, as to keep it down after it is ſeparated from its baſis, or elſe ariſes along with it, and defiles the product. Theſe methods therefore of extracting the ſpirit of ſalt have been for ſome time laid aſide; the foregoing, in which the pure vitriolic acid itſelf is uſed, being in all reſpects more convenient and advantageous.

AQUA FORTIS.

Lond.

Take of
  Nitre,
  Green vitriol uncalcined, each three pounds;
  The ſame vitriol calcined, one pound and a half.
Mix them well together, and diſtil with a very ſtrong fire, as long as any red vapour ariſes.

AQUA FORTIS SIMPLEX.

Single aquafortis.

Edinb.

Take two parts of vitriol calcined to whiteneſs, and one part of powdered nitre. Mix them very well together, and fill therewith an earthen retort to two-thirds; then fit on a large receiver, and proceed to diſtillation; which is to be performed in the ſame manner as directed for ſpirit of ſalt.

THE vitriol here is not liable to the inconvenience mentioned in the foregoing remark; it only occaſions a greater heat to be neceſſary than when the pure vitriolic acid is uſed, for the acid of the vitriol muſt be extricated before it can act on the nitre; the fire, however, muſt not be extremely ſtrong, otherwiſe ſome of the metallic parts of the vitriol will be forced over along with the nitrous acid. The direction of thoroughly mixing the ingredients ought to be well attended ed to, for if this be neglected, or but ſlightly performed, the due quantity of acid will not be obtained. The produce of theſe proceſſes is a ſpirit of nitre containing as much more phlegm, or watery moiſture, than Glauber's ſpirit, as the vitriol employed in its preparation does more than an equivalent quantity of oil of vitriol.

AQUA FORTIS DUPLEX.

Double aquafortis.

Edinb.

Take of
- Green vitriol calcined to whiteneſs,
- Clay dried and powdered,
- Powdered nitre, of each equal parts.

Mix them well together, and diſtil in an earthen retort as above.

This proceſs is an unartful one. The clay appears to be of very little uſe, though the contrivers of the proceſs ſeem, from the reduction of the vitriol, to have laid conſiderable ſtreſs on it. All it can do is to hinder the melting of the ſalts. It would doubtleſs be better to omit the clay, and increaſe the quantity of the vitriol; which, in order to make the aquafortis of the ſtrength here intended, ſhould undergo a further degree of calcination.

The great demand which there is in ſundry buſineſſes for aquafortis has occaſioned the preparation of it to become a trade by itſelf. Hence larger and leſs expenſive inſtruments than thoſe mentioned before, have been contrived. The common diſtilling veſſel is a large iron pot, with an earthen, or ſtoneware ſtill-head, to which is adapted a large glaſs globe, or elſe a jar made of the ſame kind of clay as the head. The workmen are not at the trouble either of drying the vitriol, or pounding the nitre, but throw them both promiſcuouſly into the pot, where the fire ſoon liquefies, and mixes them together. The aquafortis, prepared after this manner, is extremely impure, and utterly unfit for many purpoſes, ſuch in particular are the ſolution of mercury and of ſilver: the violence of the fire, employed in the operation, never fails to elevate ſome of the metallic parts of the vitriol; the nitre is uſed rough or unrefined, which containing a portion of ſea ſalt, ſends over ſome of the marine along with the nitrous acid; nor are the ingredients free from bits of wood, or other vegetable matters, which, burning in the proceſs, foul the ſpirit with an empyreumatic oil, giving it, at the ſame time, an high colour. If therefore common aquafortis be employed in any medicinal preparation, it ought to be previouſly purified; the moſt effectual method of doing which is the following.

AQUA FORTIS PURIFICATA.

Purified aquafortis.

Drop into the aquafortis a drop or two of ſolution of ſilver. If it become milky or cloudy, drop in a little more of the ſolution, till a freſh addition occaſions no further change; allowing proper intervals for the white matter to ſettle, that the effect of a new addition may be the better perceived. Then pour the liquor into a glaſs retort, and diſtil in a ſand-heat to dryneſs.

The milkineſs produced by the ſolution of ſilver is a certain mark of marine or vitriolic acid in the aquafortis; the ſilver abſorbing thoſe acids, and forming with them a concrete which the liquor is incapable of holding diſſolved. If the aquafortis be not made at all cloudy by this ſolution, we may be certain of its having been previouſly free from the leaſt admixture of thoſe heterogeneous acids; and, when it ceaſes to become milky from a freſh addition, we may be equally certain, that how much ſoever it might have contained of them at firſt, they are now perfectly ſeparated.

The ſolution of ſilver is to be made in aquafortis already purified. Where this cannot be had, the little quantity generally ſufficient for the preſent purpoſe, may be made in the common impure ſort of aquafortis, which will be purified during the diſſolution itſelf. Put a thin bit of ſilver into a little of the aquafortis, and ſet the vial in a ſand-heat. If the aquafortis be pure, numerous minute bubbles will iſſue from the ſilver on all ſides, and the metal will gradually diſſolve without altering the tranſparency of the liquor. But, if the aquafortis contain marine or vitriolic acid, it will quickly become milky, thoſe acids uniting with the ſilver, as in the above proceſs, as faſt as the nitrous acid diſſolves it. As the white matter precipitates upon, and adheres to, the ſurface of the ſilver, ſo as to impede the further action of the menſtruum; the liquor muſt be filtered and treated in the ſame manner with a bit of freſh ſilver. If any milkineſs ſtill enſue, the operation muſt be repeated with another piece of the metal, till all the foreign acids be ſeparated, and the ſilver is found to diſſolve clear. Good aquafortis takes up about half its own weight of ſilver.

The ſilver may be recovered from the white ſettling, without any conſiderable loſs, by the following method.

Let the matter be thoroughly dried, then mixed with a little potaſh, and the mixture made into a paſte with oil. Put this paſte into a crucible, ſurrounding it every where with a little more potaſh. Set the crucible in a proper furnace, and gradually raiſe the fire ſo as to bring the whole into fuſion. When the crucible is grown cold, a lump of fine ſilver will be found in the bottom.

AQUA FORTIS COMPOSITA

Compound aquafortis.

Lond.

Take ſixteen ounces of aquafortis, and one dram of ſea ſalt. Diſtil them to dryneſs.

This is deſigned as a menſtruum for quickſilver, for the preparation of the red mercurial corroſive, or red precipitate, as it is called; which the marine acid in this compound liquor renders of a more ſparkling appearance, and more beautiful to the eye, than when made with the nitrous acid alone.

AQUA REGIA.

Edinb.

Put an ounce of powdered ſal ammoniac into a large cucurbit, and add to it, by little and little at a time, four ounces of ſpirit of nitre, or double aquafortis. Let them ſtand together in a ſand-heat, till the ſalt be entirely diſſolved.

The glaſs in which the mixture is made ſhould be placed under a chimney (to carry up the offenſive vapour) and its orifice by no means ſtopt till the ſalt is perfectly diſſolved, and the fumes ceaſe to ariſe with impetuoſity. Theſe cautions are extremely neceſſary, if the proceſs be conducted according to the former directions. But if the ſal ammoniac, finely powdered, be gradually added to the acid ſpirit (which ought to be of a middle degree of ſtrength between ſingle aquafortis and ſtrong ſpirit of nitre) the ſolution will proceed without any inconvenience; and may be finiſhed in a reaſonable compaſs of time, provided the mixture be now and then ſtirred—The only uſe of aqua regia and the aqua fortis, is as menſtrua for certain mineral ſubſtances.

ACETUM DISTILLATUM, vel SPIRITUS ACETI.

Diſtilled vinegar, or ſpirit of vinegar.

Lond.

Let vinegar be diſtilled with a gentle heat as long as the drops fall free from an empyreuma.

If ſome part of the ſpirit which comes over firſt be thrown away, the reſt will be the ſtronger.

Edinb.

Put any quantity of the beſt vinegar into a large, ſhallow, glaſs veſſel, and with a gentle heat, in a ſand-bath, evaporate about one-fourth part of it: then diſtil the remainder in an alembic, with a glaſs head, gradually increaſing the fire, as long as the ſpirit comes off clear.

This proceſs may be performed either in a common ſtill with its head, or in a retort. The better kinds of wine vinegar ſhould be made uſe of: thoſe prepared from malt liquors, however fine and clear they may ſeem to be, contain a large quantity of a viſcous ſubſtance, as appears from the ſlimineſs and ropineſs to which they are very much ſubject; this not only hinders the acid parts from ariſing freely, but likewiſe is apt to make the vinegar boil over into the recipient, and at the ſame time diſpoſes it to receive a diſagreeable impreſſion from the fire. And indeed, with the beſt kind of vinegar, if the diſtillation be carried on to any great length, it is extremely difficult to avoid an empyreuma. The beſt method of preventing this inconvenience is, if a retort be made uſe of, to place the ſand but a little way up its ſides, and when ſomewhat more than half the liquor is come over, to pour on the remainder a quantity of freſh vinegar, equal to that of the liquor drawn off. This may be repeated three or four times; the vinegar ſupplied at each time being previouſly made hot. The addition of cold liquor would not only prolong the operation; but alſo endanger breaking the retort. If the common ſtill be employed, it ſhould likewiſe be occaſionally ſupplied with freſh vinegar, in proportion as the ſpirit runs off; and this continued, until the proceſs can be conveniently carried no further. The diſtilled ſpirit muſt be rectified by a ſecond diſtillation in a retort, or glaſs alembic; for though the head and receiver be of glaſs or ſtone-ware, the acid will contract a metallic taint from the pewter worm.

The reſiduum of this proceſs is commonly thrown away as uſeleſs, though if ſkilfully managed, it might be made to turn to good account; the moſt acid parts of the vinegar ſtill remaining in it. Mixed with about three times its weight of fine dry ſand, and committed to diſtillation in a retort, with a well-regulated fire, it yields an exceeding ſtrong acid ſpirit; together with an empyreumatic oil, which taints the ſpirit with a diſagreeable odour. This acid is, nevertheleſs, without any rectification, better for ſome purpoſes (as a little of it will go a great way) than the pure ſpirit;

rit; particularly for making the ſal diureticus of the London diſpenſatory; for there the oily matter, on which its ill flavour depends, is burnt out by the calcination.

The ſpirit of vinegar is a purer and ſtronger acid than vinegar itſelf, with which it agrees in other reſpects. The medical virtues of theſe liquors may be ſeen in the ſection of acids, and under the article Acetum. Their principal difference from the mineral acids conſiſts in their being milder, leſs ſtimulating, leſs diſpoſed to affect the kidneys, and promote the urinary ſecretions, or to coagulate the animal juices. The matter, left after the diſtillation in glaſs veſſels, though not uſed in medicine, would doubtleſs prove a ſerviceable detergent, ſaponaceous acid; and in this light it ſtands recommended by Boerhaave.

SECT. V.

Combination of Acid with vinous Spirits.

ALL the mineral acids, on being mixed with ſpirit of wine, raiſe a great ebullition and heat. If the acid be in ſmall quantity, it unites intimately with the vinous ſpirit, ſo as to ariſe with it in diſtillation. The taſte, and all the characters of acidity, are deſtroyed; and the mixture acquires a grateful flavour, which neither of the ingredients had before.

SPIRITUS VITRIOLI DULCIS.

Dulcified ſpirit of vitriol.

Lond.

Take of the ſtrong ſpirit or oil of vitriol, one pound; of rectified ſpirit of wine, one pint. Cautiouſly mix them together by little and little at a time, and diſtil the mixture, with a very gentle heat, till a black froth begins to ariſe. Then immediately remove the whole from the fire, leſt this froth ſhould paſs over into the recipient, and fruſtrate the operation.

Edinb.

Take of

The ethereal vitriolic liquor hereafter given, one part;

Rectified ſpirit of wine, two parts.

Mix them together.

The different proportions of the acid ſpirit to the vinous in theſe proceſſes, make no variation in the quality of the produce, provided the diſtillation be duly conducted; all the redundant acid being left in the reſiduum.

A good deal of caution is requiſite in mixing the two liquors. Some direct the ſpirit of wine to be put firſt into the retort, and the oil of vitriol to be poured upon it all at once; a method of procedure by no means adviſable, as a violent heat and ebullition always enſue, which not only diſſipate a part of the mixture, but hazard alſo the breaking of the veſſel, to the great danger of the operator. Others put the oil of vitriol into the retort firſt, then by means of a funnel, with a long pipe that may reach down juſt to the ſurface of the acid, pour in the ſpirit of wine. If this be done with ſufficient caution, the vinous ſpirit ſpreads itſelf on the ſurface of the oil of vitriol, and the two liquors appear diſtinct: on ſtanding for a week or two, the vinous ſpirit is gradually imbibed, without any commotion, and the veſſel may be then ſafely ſhaken, to complete the mixture. But if the ſpirit be poured in too haſtily at firſt, or if the veſſel be moved before the two liquors have in ſome degree incorporated, the ſame effect enſues as in the foregoing caſe. The only ſecure way is, to add the oil of vitriol to the ſpirit of wine by a little quantity at a time, waiting till the firſt addition is incorporated before another quantity is put in ; by this management, the heat that enſues is inconſiderable, and the mixture is effected without any inconvenience.

The diſtillation ſhould be performed with an equable and very gentle heat, and not continued ſo long as till a black froth begins to appear: for, before this time, a liquor will ariſe of a very different nature from the ſpirit here intended. The ſeveral products are moſt commodiouſly kept apart by uſing a tubulated receiver, ſo placed, that its pipe may convey the matter which ſhall come over, into a vial ſet underneath: the juncture of the retort and recipient is to be luted with a paſte made of linſeed meal, and further ſecured by a piece of wet bladder: the lower juncture may be cloſed only with ſome ſoft wax, that the vial may be occaſionally removed with eaſe.

The true dulcified ſpirit ariſes in thin ſubtile vapours, which condenſe upon the ſides of the recipient in ſtraight ſtriæ. It is colourleſs as water, very volatile, inflammable, of an extremely fragrant ſmell, in taſte ſomewhat aromatic.

After the fire has been kept up for ſome time, white fumes ariſe, which either form irregular ſtriæ, or are collected into large round drops like oil. On the firſt appearance of theſe, the vial (or the receiver, if a common one be made uſe of) muſt be taken away. If another be ſubſtituted, and the diſtillation continued, an acid liquor comes over, of an exceeding pungent ſmell, like the fumes of burning brimſtone. At length a black froth begins haſtily to ariſe, and prevents our carrying the proceſs further.

On the ſurface of the ſulphureous ſpirit is found ſwimming a ſmall quantity of oil, of a light yellow colour, a ſtrong, penetrating, and very agreeable ſmell This oil ſeems to be nearly of the ſame nature with the eſſential oils of vegetables. It readily and totally diſſolves in rectified ſpirit of wine, and communicates to a large quantity of that menſtruum the taſte and ſmell of the aromatic or dulcified ſpirit.

The matter remaining after the diſtillation is of a dark blackiſh colour, and ſtill highly acid. Treated with freſh ſpirit of wine, in the ſame manner as before, it yields the ſame productions; till at length, all the acid that remains unvolatilized being ſatiated with the inflammable oily matter of the ſpirit, the compound proves a bituminous, ſulphureous maſs; which expoſed to the fire in open veſſels, readily burns, leaving a conſiderable quantity of fixt aſhes; in cloſe ones, explodes with violence; and with fixt alkaline ſalts, forms a compound, nearly ſimilar to one compoſed of alkalies and ſulphur.

Dulcified ſpirit of vitriol has been for ſome time greatly eſteemed both as a menſtruum and a medicine. It diſſolves ſome reſinous and bituminous ſubſtances more readily than ſpirit of wine alone, and extracts elegant tinctures from ſundry vegetables: eſpecially if rectified, as in the ſecond of the above proceſſes, from a little fixt alkaline ſalt, to ſeparate any redundant acidity. As a medicine, it promotes perſpiration and the urinary ſecretion, expels flatulencies, and in many caſes abates ſpaſmodic ſtrictures, eaſes pains, and procures ſleep. The doſe is from ten to eighty or ninety drops in any convenient vehicle. It is not eſſentially different from the celebrated anodyne liquor of Hoffman; to which it is, by the author himſelf, not unfrequently directed as a ſuccedaneum.

LIQUOR ANODYNUS MINERALIS HOFFMANNI.

Hoffman's mineral anodyne liquor.

Into half a pound of concentrated oil of vitriol, placed in a large glaſs retort, pour by little and little, through a long-ſtemmed funnel, one pint and a half of highly rectified ſpirit of wine. Stop the mouth of the retort, digeſt for ſome days, and then diſtil with a very gentle heat. At firſt a fragrant ſpirit of wine will ariſe; and after it, a more fragrant volatile ſpirit, to be caught in a freſh receiver. The receiver being again changed, a ſulphureous, volatile, acid phlegm comes over; and at length a *ſweet oil of vitriol,* which ſhould be immemediately ſeparated, leſt it be abſorbed by the phlegm. Mix the firſt and ſecond ſpirits together, and in two ounces of this mixture diſſolve twelve drops of the ſweet oil. If the liquor has any ſulphureous ſmell, rediſtil it from a little ſalt of tartar. *Pariſ.*

Whether this be the exact preparation, ſo much recommended and ſo often preſcribed by Hoffman, as an anodyne and antiſpaſmodic, we cannot determine. We learn from his own writings, that his anodyne liquor was compoſed of the dulcified ſpirit of vitriol, and the aromatic oil which ariſes after it; but not in what proportions he mixed them together. The college of Wirtemberg ſeem to think that all the oil was mixed with all the ſpirit obtained in one operation, without regard to the preciſe quantities.

AQUA RABELLIANA.

Eau de Rabel.

Take four ounces of oil of vitriol, and twelve ounces of rectified ſpirit of wine. Pour the vinous ſpirit gradually into the acid, and digeſt in a cloſe matraſs. *Pariſ.*

This liquor has been greatly celebrated in France as a reſtringent, and for the ſame purpoſes as the dulcified ſpirit; from which it differs in having a conſiderable acidity.

LIQUOR ÆTHEREUS VITRIOLICUS.

The etherial vitriolic liquor.

Edinb.

Take of
Rectified ſpirit of wine,
Oil of vitriol, of each thirty-two ounces.

Pour the ſpirit into a glaſs retort, that will bear the ſudden heat, and pour the acid, at once, upon it. Mix them gradually and cautiouſly together, by gently ſhaking the retort; and immediately diſtil by a ſand-heat, prepared before hand for that purpoſe, the recipient being placed in a veſſel of ſnow or water. The fire ſhould be ſo regulated that the liquor may boil as ſoon as poſſible, and continued to boil till ſixteen ounces are diſtilled, when the retort is to be removed.

To the diſtilled liquor add two drams of the ſtronger common cauſtic; and diſtil again, from a very high retort, with a very gentle fire, the recipient being placed as before in a refrigeratory. Continue the diſtillation till ten ounces are drawn off.

To the acid reſiduum, after the diſtillation, if you pour ſixteen ounces of rectified ſpirit of wine, and repeat the diſtillation, more etherial liquor may be obtained; and this proceſs may be repeated ſeveral times.

The preparation of this ſingular fluid has hitherto been confined to few hands; for though ſeveral proceſſes have been publiſhed for obtaining it, the ſucceſs of moſt of them is precarious, and ſome of them are accompanied with danger to the operator. Where the dulcified ſpirit only is the object, the method, as before directed for it, ſucceeds to perfection: but when it is made with a view to the ether, a variation is neceſſary, for only a ſmall quantity of ether can be ſeparated from the ſpirit ſo prepared. There, the diſtillation is performed with an equable and gentle heat: here, the fire ſhould be haſtily raiſed, ſo as to make the liquor boil; for on this circumſtance the produce of ether principally depends. (See a paper on this ſubject by Dr. Morris, in the ſecond volume of the Medical Obſervations and Inquiries.)

Ether or ethereal ſpirit is the lighteſt, moſt volatile, and inflammable, of all known liquids. It is lighter than the moſt highly rectified ſpirit of wine, in the proportion of about 7 to 8. A drop, let fall on the hand, evaporates almoſt in an inſtant, ſcarcely rendering the part moiſt. It does not mix, or only in a ſmall quantity, with water, ſpirit of wine, alkaline lixivia, volatile alkaline ſpirits, or acids; but is a powerful diſſolvent for oils, balſams, reſins, and other analogous ſubſtances. It has a fragrant odour, which in conſequence of the volatility of the fluid, is diffuſed through a large ſpace. Its medical effects are not as yet much known, though it is not to be doubted that a fluid of ſo much ſubtilty muſt have conſiderable effects. It has often been found to give eaſe in violent head-achs, by being applied externally to the part, and to relieve the tooth-ach, by being laid on the afflicted jaw. It has been given alſo internally, with benefit, in whooping coughs, and hyſterical caſes, from two or three drops to five and twenty, in a glaſs of wine or water; which ſhould be ſwallowed as quick as poſſible, as the ether ſo ſpeedily exhales.

SPIRITUS NITRI DULCIS.

Dulcified ſpirit of nitre.

Lond.

Take a quart of rectified ſpirit of wine, and half a pound of Glauber's ſpirit of nitre. Mix them, by pouring the nitrous ſpirit into the other; and diſtil with a gentle heat, as long as the liquor which comes over does not raiſe any efferveſcence with lixivial ſalts.

Edinb.

Take of
Rectified ſpirit of wine, three pounds;
Nitrous acid, one pound.

Pour the rectified ſpirit of wine into a large bolt-head, placed in a veſſel of cold water, and add by degrees the acid, carefully ſhaking the veſſel: ſet it in a cool place, lightly ſtopped, for ſeven days; afterwards diſtil the liquor in a water-bath, the receiver being placed in a veſſel filled either with water or ſnow, as long as any ſpirit ariſes.

Here the operator muſt take care not to invert the order of mixing the two liquors, by pouring the vinous ſpirit into the acid; for if he ſhould, a violent effervescence and heat would enſue, and the matter be diſperſed in highly noxious red fumes. The moſt convenient and ſafe method of performing the mixture ſeems to be, to put the inflammable ſpirit into a large glaſs body with a narrow mouth, placed under a chimney, and to pour upon it the acid, by means of a glaſs funnel, in very ſmall quantities at a time; ſhaking the veſſel as ſoon as the effervescence enſuing upon each addition ceaſes, before a freſh quantity is put in. By theſe means, the glaſs will heat equally, and be prevented from breaking. During the action of the two ſpirits upon one another, the veſſel ſhould be lightly covered; if cloſe ſtopt, it will burſt: and, if left entirely open, ſome of the more valuable parts will exhale. Lemery directs the mixture to be made in an open veſſel: by which unſcientifical procedure he uſually loſt, as he himſelf obſerves, half his liquor: and we may preſume that the remainder was not the medicine here intended.

The liquors, mixed together, ſhould be ſuffered to reſt for at leaſt twelve hours, that the fumes may entirely ſubſide, and the union be in ſome meaſure completed. The diſtillation ſhould be performed with a very ſlow and well regulated fire; otherwiſe the vapour will expand with ſo much force as to burſt the veſſels. Wilſon ſeems to have experienced the juſtneſs of this obſervation; and hence directs the juncture of the retort and receiver not to be luted, or but ſlightly. If a tubulated recipient, with its upright long pipe, be made uſe of, and the diſtillation performed with the heat of a water-bath, the veſſels may be luted without any danger. This method has likewiſe another advantage, as it aſcertains the time when the operation is finiſhed. Examining the diſtilled ſpirit every now and then with alkaline ſalts, as directed before, is ſufficiently troubleſome: whilſt in a water-bath, we may ſafely draw over all that will ariſe, for this heat will elevate no more of the acid than what is dulcified by the vinous ſpirit.

Dulcified ſpirit of nitre has been long held, and not undeſervedly, in great eſteem. It quenches thirſt, promotes the natural ſecretions, expels flatulencies, and moderately ſtrengthens the ſtomach. It may be given from twenty drops to a dram, in any convenient vehicle. Mixed with a ſmall quantity of ſpirit of hartſhorn, the ſpiritu volatilis aromaticus, or any other alkaline ſpirit, it proves a mild, yet efficacious, diaphoretic, and often notably diuretic; eſpecially in ſome febrile caſes, where ſuch a ſalutary evacuation is wanted. A ſmall proportion of this ſpirit, added to malt ſpirits, gives them a flavour approaching to that of French brandy.

SPIRITUS SALIS DULCIS.

Dulcified ſpirit of ſalt.

Edinb.

This is made with ſpirit of ſalt, after the ſame manner as dulcified ſpirit of nitre.

The dulcification of the ſpirit of ſalt does not ſucceed ſo perfectly, as that of the two foregoing acids, only a minute portion of it uniting with the ſpirit of wine, and, unleſs the proceſs be ſkilfully managed, ſcarce any. Some have held this ſpirit in great eſteem againſt weakneſs of the ſtomach, indigeſtion, and the like, following from hard drinking; at preſent it is not often made uſe of or kept in the ſhops.

SECT. VI.

Neutral Salts.

WHEN any acid and alkaline ſalts are mixed together, in ſuch proportion that neither of them may prevail, they form by their coalition a new compound, called NEUTRAL. In all the combinations of this kind (except ſome of thoſe with vegetable acids) the alkali and acid are ſo ſtrongly retained by one another, that they are not to be diſunited by any degree of fire. How volatile ſoever the acid were by itſelf, if combined with a fixt alkali, it proves almoſt as fixt as the pure alkali. If the alkali be of the volatile kind, the compound proves alſo volatile, ſubliming in its whole ſubſtance, without any ſeparation of its parts. There are, however, means of procuring this diſunion, by the intervention of other bodies, as we have already ſeen in the ſeparation of the volatile alkali of ſal ammoniac, and of the acids of nitre and ſea ſalt. But, in all caſes of this kind, only one of the ingredients of the neutral ſalt can poſſibly be obtained by itſelf, the ſeparation of this happening ſolely in virtue of the ſuperadded body's uniting with the other.

There is another kind of compound ſalts, formed by the coalition of acids with earthy and metallic bodies. Theſe ſalts differ from the true neutral ones in ſeveral obvious properties; ſome of them change blue vegetable juices to a green like alkalies, and others to a red like acids, while neutral ſalts make no change in the colour: mixed with boiling milk, they coagulate it, while neutral ſalts rather prevent its coagulation. From moſt of them, the acid is diſunited by fire, without the intervention of any additional matter, of which we have ſeen an inſtance in the diſtillation of the acid of vitriol. But the moſt diſtinguiſhing, and univerſal, character of theſe ſalts is, that ſolutions of them, on the addition of any fixt alkali, grow turbid, and depoſit their earth or metal. It were to be wiſhed that cuſtom had appropriated ſome particular name to the ſalts of this claſs, to prevent their being confounded, which ſeveral of them have often been, with the perfect neutral ſalts.

	Vitriolic acid.	Nitrous acid.	Marine acid.	Acetous acid.
Common fixt alkali.	Vitriolated tartar.	Common nitre.	Regenerated ſea ſalt.	Sal diureticus.
Alkali of sea salt.	Glauber's ſalt.	Cubical nitre.	Sea ſalt.	A ſalt ſimilar to ſal diuret.
Volatile alkali.	Philoſophic ſal ammon.	Volatile nitre.	Sal ammoniac.	Spiritus Mindereri.
Calcareous earth.	Selenites.	Calcareous nitre.	Calcareous muriatic ſalt	A ſubaſtringent ſalt.
Magnesia.	Sal catharticus amarus.	Purging ſalts, not diſtinguiſhed by any particular name.		
Soluble earth of clay.	Alum.	Aſtringent ſalts, not diſtinguiſhed by any particular name.		

The preceding table exhibits, at one view, the ſeveral compound ſalts reſulting from the union of each of the pure acids with each of the common alkalies and ſoluble earths; the acids being placed on the top, the alkalies and earths on the left hand, and the compound ſalts in the reſpective interſections; and is thus to be underſtood. In the upright columns, under each of the acids, are ſeen the ſeveral compound ſalts reſulting from the union of that acid with the reſpective alkalies and earths on the left ſide. In the tranſverſe columns, oppoſite to each particular alkali and earth, are ſeen the compound ſalts reſulting from the union of that alkali or earth with the reſpective acids on the top; and converſely, of each of the compound ſalts expreſſed in the table, the component parts are found on the top of the upright column, and on the left ſide of the tranſverſe column, in whoſe interſection that particular ſalt is placed. Some of theſe ſalts have been already treated of in the Materia medica; but it was thought proper to unite them here into one view, for the greater perſpicuity in regard to their compoſition, and the different properties which their component parts aſſume in different combinations.

Cryſtallization of ſalts.

This is a general operation on neutral and moſt of the other compound ſalts. It depends upon theſe principles: that water, of a certain degree of heat, diſſolves, of any particular ſalt, only a certain determinate quantity: that, on increaſing the heat, it diſſolves more and more (except only in one inſtance, common ſalt) till it comes to boil, at which time both its heat and diſſolving power are at their height: that, in returning to its firſt temperature, it throws off again all that the additional heat had enabled it to diſſolve: that, independently of any increaſe or diminution of heat, a gradual evaporation of the fluid itſelf will occaſion a proportional ſeparation of the ſalt: and that the particles of the ſalt, in this ſeparation from the water, unleſs too haſtily forced together by ſudden cooling, or ſtrong evaporation, or diſturbed by external cauſes, generally concrete into tranſparent and regularly figured maſſes, called cryſtals. The ſeveral ſalts aſſume, in cryſtallization, figures peculiar to each. Thus the cryſtals of nitre are hexagonal priſms; thoſe of ſea ſalt, cubes; thoſe of alum, octohedral maſſes; while ſal ammoniac ſhoots into thin fibrous plates like feathers.

The uſe of preparing ſalts in a cryſtalline form is not merely in regard to their elegance, but as a mark of, and the means of ſecuring, their purity and perfection. From ſubſtances not diſſoluble in water, they are purified by the previous ſolution, and filtration: by cryſtallization, one ſalt is purified from an admixture of ſuch other ſaline bodies as diſſolve either more eaſily or with more difficulty than itſelf. For, if two or more ſalts be diſſolved together in a certain quantity of hot water, the ſalt, which requires the greateſt heat for its ſolution in that quantity of water, will firſt begin to ſeparate in cooling: and, if the water be kept evaporating, in an uniform heat, the ſalt which requires moſt water in that heat will be the firſt in cryſtallizing. In all caſes of this kind, if the proceſs be duly managed, the firſt ſhootings are generally well figured and pure. The ſucceeding ones, ſooner or later, according to the quantity of the other ſalts in the liquor, retain an admixture of thoſe ſalts, which they betray by their ſmallneſs and figure.

In order to the cryſtallization of ſaline ſolutions, it is cuſtomary to boil down the liquor, till ſo much of the fluid have exhaled, as that the ſalt begins to concrete from it even while hot. forming a pellicle upon the ſurface expoſed to the air. When this mark appears, the whole is removed into a cold place. This method ſeldom affords perfect cryſtals: for, when water is thus ſaturated with the ſalt in a boiling heat, and then ſuddenly cooled; the particles of the ſalt run haſtily and irregularly together, and form only a confuſed ſemitranſparent maſs. It is by ſlow concretion that moſt ſalts aſſume their cryſtalline form in perfection. The evaporation ſhould be gentle, and continued no longer, than till ſome drops of the liquor, in a heat below boiling, being let fall upon a cold glaſs plate, diſcover cryſtalline filaments. The liquor is then immediately to be removed from the fire into a leſs warm, but not a cold place; and the veſſel covered with a cloth to prevent the acceſs of cold air, and the formation of a pellicle, which falling down through the fluid, would diſturb the regularity of the cryſtallization. This is the moſt effectual method for moſt ſalts; though there are ſome, whoſe cryſtallization is to be effected, not by an abatement of the heat, but by a continued equable evaporation of the fluid; ſuch in particular is ſea ſalt.

Salts retain in cryſtallization a portion of the aqueous fluid, without betraying any marks of it to the eye; on this their cryſtalline form appears in great meaſure to depend. The quantity of phlegm or water varies in different ſalts; dry cryſtals of nitre were found, on ſeveral careful trials, to contain about one-twentieth of their weight; thoſe of alum, one-ſixth; ſea-ſalt, one-fourth; borax, green vitriol, and the purging ſalts, no leſs than one half. The ſame ſalt appears always to retain nearly the ſame quantity.

Some ſalts diſſolve in ſpirit of wine; and here alſo, as in water, the ſolution is limited, though the ſalt is not eaſily recovered in a cryſtalline form. Such in particular are, combinations of the nitrous acid with volatile alkalies, and with calcareous earths; of the marine acid with all the ſoluble earths;

earths ; of the acetous with fixt and volatile alkalies. Scarce any of the compound ſalts, whoſe acid is the vitriolic, are affected by vinous ſpirits.

Salts differ greatly in their diſpoſition to aſſume and retain a cryſtalline form.. Many even of the compound kind imbibe humidity like fixt alkalies, ſo as to cryſtallize with difficulty, and, when cryſtallized, or exſiccated by heat, to deliquiate again in the air. Such are the combinations of the nitrous and marine acid with all the ſoluble earths, and of the acetous both with earths and alkalies. The vitriolic acid, on the other hand, forms, with all the ſubſtances it diſſolves, permanent cryſtals ; as do likewiſe the other mineral acids with all alkalies.

The cryſtallization of thoſe ſalts, which are not diſſoluble in ſpirit of wine, is generally promoted by a ſmall addition of that ſpirit ; which abſorbing the water, or weakening its diſſolving power on the ſalt, diſpoſes the ſalt to part from it more freely. The operator muſt be careful however not to add too much of the ſpirit, eſpecially where the ſalt is compoſed of an earthy or metallic body united with the acid ; leſt it abſorb the acid as well as the water, and inſtead of a gradual and regular cryſtallization, haſtily precipitate the earth or metal in a powdery form.

Mr. Roulle, of the French academy of ſciences, has examined with great attention the phenomena of the cryſtallization of ſalts, and publiſhed the reſult of his obſervations in different volumes of the Memoirs of that academy. Among other curious particulars, he has given a general diſtribution of ſalts, in regard to their cryſtallization, which will be of practical utility to the artiſt.

He divides evaporation into three degrees ; *inſenſible evaporation*, or that effected by the natural warmth of the atmoſphere, from freezing, up to the heat of the ſummer's ſun; *mean evaporation*, commencing with the ſun's heat, and extending to that in which the exhaling ſteam is viſible to the eye, and the liquor too hot to be endured by the hand ; and *ſtrong evaporation*, reaching from this period to boiling. He divides ſalts into ſix claſſes ; the diſtinctions of which are taken from the degree of evaporation in which they cryſtallize moſt perfectly, from the figure of their cryſtals, their diſpoſition to remain ſingle or unite in cluſters, and their receiving an increaſe from a continuance of the cryſtallization.

I. The firſt claſs conſiſts of ſalts which cryſtallize into ſmall plates or very thin ſcales. The cryſtals are ſingle. They are, of all ſalts, thoſe which cryſtallize moſt frequently on the ſurface of their ſolutions, which retain leaſt water in their cryſtals, and require moſt to diſſolve in. They cryſtallize moſt perfectly by inſenſible evaporation. } *Sedative ſalt. Selenites.*

II. Salts whoſe cryſtals are cubes, cubes with the angles truncated, or pyramids of four or ſix ſides. They form ſingle, and change their figure by new accretions. By inſenſible evaporation they cryſtallize at the bottom, by mean evaporation at the ſurface, and by both kinds they prove perfect and regular. By ſtrong evaporation, } *Sea ſalt. Vitriolated tartar. Spiritus ſalis marini coagulatus.*

evaporation, the liquor contracts a pellicle, and in cooling yields few cryſtals, and thoſe ill figured.

Tartar.

III. Salts whoſe cryſtals are tetrahedral, pyramidal, parellelopipeds, rhomboidal, and rhomboidal parellelopipeds; with the angles variouſly truncated, according to different circumſtances. They form ſingle (except that ſome few unite by the baſes) and change their figure by new accretions. They cryſtallize at the bottom, moſt perfectly by inſenſible evaporation: by mean and ſtrong evaporation, the liquor contracts a pellicle, and in cooling the cryſtals adhere to the pellicle, and prove confuſed and ill formed. They retain a large quantity of water.

Alum. Borax. Cubical nitre. Seignett's ſalt. Green vitriol. Blue vitriol. White vitriol. Verdigris.

IV. Salts whoſe cryſtals are flattened parallelopipeds, with the extremities terminating in two ſurfaces inclined to one another, ſo as to form a point and acute angles with the large ſides. They cluſter together, uniting, by the baſes, into tufts. The cryſtals are largeſt and moſt regular by inſenſible evaporation. By mean and haſty evaporation, a pellicle is formed, and in cooling the cryſtals prove very ſmall. They retain a large quantity of water in cryſtallization, and require little to diſſolve in.

Soluble tartar. Tartar united with volatile alkali. Tartar united with abſorbent earth.

V. Salts whoſe cryſtals are very long, in form of needles, priſms, or columns of different ſurfaces. They ſhoot at the bottom, and cluſter together into tufts of regular figures. By inſenſible evaporation they ſcarce ever cryſtallize well. By mean and ſtrong evaporation, they give a pellicle, and in ſlow cooling, if the evaporation was not carried too far, they yield perfectly well formed cryſtals, which at firſt ſwim, but ſoon fall to the bottom. If the evaporation was too long continued, the cryſtals prove confuſed and ill formed.

Sal ammon. Philoſ. ſal ammon. Nitre. Vol. nitre. Glauber's ſalt. Salt of amber. Vineg. united with chalk. Volat. vitri. acid united with fixt alk.

VI. Salts whoſe cryſtals are in very ſmall needles, or of other indeterminate figures. None of them cryſtallize by inſenſible evaporation, and few of them by the mean degree. They require to be reduced, by ſtrong evaporation, to a thick conſiſtence; they then contract a pellicle, and cryſtallize with confuſion. If the cryſtals be wanted regular, ſpirit of wine muſt be uſed, or ſome other medium, if the ſalt be ſoluble in ſpirit. They readily diſſolve in water, and liquefy in the air.

Sal diureticus. Marine acid united with abſorbent earths. Nitrous acid united with abſorbent earths.

NITRUM PURIFICATUM.

Purified nitre.

Lond.

Boil nitre in water till it is diſſolved; filter the ſolution through paper; and, then, after due evaporation,

poration, ſet it by in a cold place, that the nitre may ſhoot into cryſtals.

Edinb.

The liquor, which remains after the cryſtallization, may be further evaporated, and ſet to ſhoot as before; but this proceſs muſt not be too long protracted.

Common nitre contains uſually a conſiderable proportion of ſea ſalt, which in this proceſs is ſeparated, the ſea ſalt remaining diſſolved after greateſt part of the nitre has cryſtallized. The cryſtals which ſhoot after the firſt evaporation, are large, regular, and pure: but when the remaining liquor is further evaporated, and this repeated a ſecond or third time, the cryſtals prove at length ſmall, imperfect, and tipt with little cubical glebes of ſea ſalt.

When rough nitre, in the ſtate wherein it is firſt extracted from the earths impregnated with it, is treated in this manner, there remains at laſt a liquor called motherley, which will no longer afford any cryſtals. This appears to participate of the nitrous and marine acids, and to contain an earthy matter diſſolved by thoſe acids. On adding alkaline lixivia, the earth is precipitated, and when thoroughly waſhed with water, proves inſipid. If the liquor be evaporated to dryneſs, a bitteriſh ſaline matter is left, which being ſtrongly calcined in a crucible, parts with the acids, and becomes, as in the other caſe, inſipid.

This earth has been celebrated as an excellent purgative, in the doſe of a dram or two; and, in ſmaller doſes, as an alterant in hypochondriacal and other diſorders. This medicine was for ſome time kept a great ſecret, under the names of *magneſia alba, nitrous panacea, count Palmer's powder, il polvere albo Romano, poudre de Sentinelli*, &c. till Lancisi made it public in his notes on the *Metallotheca Vaticana*. It has been ſuppoſed that this earth is no other than a portion of the lime commonly added in the elixation of nitre at the European nitre-works. But, though the ſpecimens of magneſia examined by Neumann, and ſome of that which has been brought hither from abroad, gave plain marks of a calcareous nature: yet the true magneſia muſt be an earth of a different kind, calcareous earths being rather aſtringent than purgative. The earthy baſis of the *ſal catharticus amarus* is found to have the properties aſcribed to the true magneſia of nitre, and appears to be the very ſame ſpecies of earth. From that ſalt therefore this medicine is now prepared, as will be ſeen hereafter.

SAL AMMONIACUS PURIFICATUS.

Purified ſal ammoniac.

Lond.

This ſalt is purified by ſolution in water, filtration, and cryſtallization, after the manner above directed for nitre.

Edinb.

The liquor remaining after the cryſtallization is to be further evaporated, and the cryſtallization repeated, ſo long as any ſalt will ſhoot from it.

The impurities of ſal ammoniac are commonly ſuch as will not diſſolve in water: and hence the purification is effected by the ſolution and filtration. The very laſt cryſtals ſeldom betray an admixture of any other ſalt.

FLOS SALIS AMMONIACI.
Flowers of ſal ammoniac.
Edinb.

Take any convenient quantity of dry ſal ammoniac in powder. Put it into an earthen cucurbit; and, having fitted on a blind-head, ſublime the ſalt with a fire gradually increaſed.

THIS proceſs ſeems to be intended with a view to the further purification of the ſalt. As ſal ammoniac, however, carries up with it ſubſtances which of themſelves are not volatile, as it is originally prepared by a ſimilar proceſs, and may poſſibly ſuffer ſome alteration in its quality from repetitions of it; the ſublimation does not appear to be either needful or expedient. Neumann obſerves, that by repeated ſublimations, it acquires at length a yellowiſh tinge, and a particular ſmell, of which it diſcovered nothing at firſt, and which he attributes to the extrication of the oily or inflammable matter of its volatile animal ſalt: for that ſal ammoniac participates of an inflammable principle, appears from its deflagration with nitre.

VITRIOLUM PURIFICATUM, vulgo GILLA VITRIOLI.
Purified white vitriol, commonly called gilla of vitriol.
Edinb.

Diſſolve white vitriol in a ſufficient quantity of warm water, filter the ſolution, and evaporate it to the conſumption of two-thirds. Set the remainder in a cold place, that the ſalt may ſhoot into cryſtals upon the ſides of the veſſel, and afterwards dry the cryſtals in the ſun. The remaining liquor is to be further evaporated, and ſet to cryſtallize as before; and this proceſs repeated till no more ſalt will ſhoot.

SOLUTIONS of white vitriol depoſit, on ſtanding, a yellow ochery ſubſtance; which, if not ſuffered to ſeparate before the liquor is exhaled and ſet to ſhoot, will foul the cryſtals. Wilſon directs the vitriol to be diſſolved in juſt as much water as will keep it from cryſtallizing, viz. two pounds or two pounds and a half of water to one pound of the vitriol; and the filtered ſolution kept warm, to ſettle, for twenty-four hours. Being then evaporated to a proper pitch for cryſtallization, a yellow matter is ſtill frequently found at the bottom, from which the liquor muſt be decanted before it is ſet by to ſhoot. It may be obſerved, that the ſeparation is by far the moſt plentiful and ſpeedy while the liquor boils. Solutions, which had ſtood in the cold for ſome days, and appeared perfectly clear, on being made to boil, became immediately turbid, and threw off a yellow ochre.

SAL VITRIOLI.
Sal of vitriol.
Lond.

Take of
White vitriol, one pound;
Strong ſpirit (called oil) of vitriol, one ounce by weight;
Water, as much as is ſufficient.

Boil them together till the vitriol is diſſolved; then filter the liquor, and after due evaporation ſet it by in a cold place to cryſtallize.

HERE the intention is not to ſeparate the ochery matter of the vitriol, but to prevent its ſeparating and colouring the cryſtals. This is effectually anſwered by the addition of the acid, by which it is kept diſſolved.

ALUMEN USTUM.

Burnt allum.

Lond.

Let alum be calcined in an iron or earthen veſſel, ſo long as it bubbles and ſwells up.

The bubbling or bliſtering proceeds from the phlegm retained in the cryſtals; after that is expelled, the ſalt cannot be made liquid by any degree of fire. Alum is compoſed of vitriolic acid and an earth: and it is remarkable, that combinations of that acid with all earths, with moſt metals, and even with vegetable fixt alkalies, are unfuſible.

The alum, thus deprived of its phlegm, proves conſiderably ſtronger, and more acrid, inſomuch as to be ſometimes employed for conſuming fungous fleſh. It is ſaid to have the inconvenience of leaving a hardneſs upon the part.

VITRIOLUM CALCINATUM.

Calcined vitriol.

Lond.

Let green vitriol be calcined in an earthen veſſel, with an open fire, till it become thoroughly dry. Then breaking the veſſel, take out the vitriol, and ſet it by for uſe, well cloſed from the air. The vitriol is ſufficiently calcined, if it has acquired a red colour at the ſides and bottom of the veſſel.

This proceſs ſucceeds tolerably well for ſmall quantities, but does not anſwer ſo perfectly for larger. As the action of the fire is exerted firſt on the external parts of the maſs, theſe will be calcined firſt, and where the quantity is large, exhibit the mark of ſufficient calcination, whilſt the internal part remains almoſt unchanged. And even if the proceſs be ſtill further continued, the effect required will not be produced; for the outſide, growing firſt hard, prevents the evaporation of the aqueous parts from within.

Edinb.

Expoſe any quantity of powdered green vitriol, in an unglazed earthen veſſel, to the action of a moderate fire, till it become white; keeping the matter continually ſtirring, to prevent its ſticking to the veſſel, and acquiring a ſtony hardneſs. If this be urged with a more vehement fire, it paſſes into a deep red ſubſtance, called colcothar of vitriol.

This method is ſufficiently troubleſome: for, unleſs the heat be very gentle, and the matter ſpread very thin over the bottom of a broad ſhallow veſſel, it is almoſt impoſſible to avoid melting it, which makes it adhere to the ſides of the pan, and renders the previous pulverization an uſeleſs labour.

The method uſually practiſed by the chemiſts is, to place a deep earthen pan, with ſome vitriol in it, upon a gentle fire; the vitriol ſoon liquefies, boils up, and by degrees incruſtates to the ſides of the veſſel. Some more vitriol is then thrown in and ſuffered to incruſtate in the ſame manner, and this procedure repeated till the pan is nearly full of the concreted matter, which proves of a whitiſh colour, except on the outſide next the pan (which muſt be broken, to take it out) where it appears yellowiſh or reddiſh, according to the continuance and degree of fire. If the vitriol be deſired ſtill further dephlegmated, this may be commodiouſly effected, by reducing the maſs into a groſs powder (which will now no longer melt) and then calcining it over a ſtrong fire, in a ſhallow iron pan, till it has gained the degree of dryneſs required, which may be known from its colour. The principal uſe of calcined vitriol is for the diſtillation of the ſpirit of vitriol. If employed for this purpoſe uncalcined, it would melt in the diſtilling veſſel, and, running into a lump, ſcarce give out any ſpirit; and the little obtained would be very weak.

TARTARUM VITRIOLATUM
Vitriolated tartar.
Lond.

Diſſolve eight ounces of green vitriol in four pints of boiling water: and, whilſt the liquor continues boiling, throw into it ſalt of tartar, or any other alkaline ſalt, till no further effervеſcence ariſes upon a freſh addition; which generally happens when four ounces, or a little more, of the ſalt have been uſed. Filter the liquor through paper, and, after due evaporation, ſet it by to cryſtallize.

Here the acid of the vitriol forſakes the iron, of which it was before in poſſeſſion, to unite with the alkaline ſalt. Particular care ought to be taken that the quantity of alkali be ſufficient to fully ſaturate the acid, otherwiſe it will not depoſit all the metal. It is convenient, even after the ſaturation ſeems, from the effervеſcence ceaſing, to be completed, to throw in a little more of the alkali; for by theſe means the preparation is ſecured from containing any metallic matter; whilſt the ſuperfluous quantity of alkali can do no prejudice, as it remains uncryſtallized.

It is remarkable, that although the vitriolic acid and fixt alkaline ſalt do each readily unite with water, and ſtrongly attract moiſture even from the air; yet the neutral ſalt reſulting from the combination of theſe two, vitriolated tartar is one of the ſalts moſt difficult of ſolution, very little of it being taken up by cold water. Hence ſome have directed the liquor in this proceſs to be filtered whilſt very hot, ſuſpecting, that if it was ſuffered to cool, great part of the ſalt would be thrown off and left upon the paper. The college, however, has avoided this inconvenience, by ordering a quantity of water which is found to be ſufficient for keeping the ſalt diſſolved in the cold, or at leaſt in a moderate warmth.

Edinb.

Take of oil of vitriol, diluted with ſix times its quantity of water, any quantity: pour it into a large glaſs veſſel, and inſtil, by degrees, fixed alkaline vegetable ſalt well purified, and diluted with ſix times its quantity of water, enough to neutralize the acid. As ſoon as the effervеſcence ceaſes, filter the liquor; and after a proper exhalation, ſet it by to cryſtallize.

This is an elegant method, and one of the leaſt troubleſome ways of preparing this ſalt. The Edinburgh college, in former editions, ordered the acid liquor to be dropt into the alkaline. By the converſe procedure, now received, it is obviouſly more eaſy to ſecure againſt a redundance of acidity: for the greater certainty in this point, it may be expedient, as in the foregoing proceſs, to drop in a little more of the alkaline ley than the ceſſation of the effervеſcence ſeems to require.

But though the manner of preparation, here directed, appears to be the moſt commodious, there is one imperfection in the proceſs, a deficiency in the quantity of water. There is not near water enough to keep vitriolated tartar diſſolved, and of conſequence, as faſt as the alkaline ſalt is neutralized by the acid, great part falls to the bottom in a powdery form. In the Leyden pharmacopœia, this inconvenience is judiciouſly provided againſt. The oil of vitriol is diluted with four times its quantity of water, and the alkaline ley being gradually dropt into it till the point of ſaturation is obtained, four times the quantity more of water is added, and the mixture boiled, that ſuch part of the ſalt as had precipitated, may be diſſolved. The liquor is then filtered while hot, and ſet by to cryſtallize. In order to obtain perfect and well-formed cryſtals, the liquor ſhould not be ſet in the cold, but continued in a moderate heat, ſuch as the hand can ſcarcely bear, that the water may ſlowly evaporate

Vitriolated tartar, in ſmall doſes, as a ſcruple or half a dram, is an uſeful aperient; in larger ones, as four or five drams, a mild cathartic, which does not paſs off ſo haſtily as the *ſal catharticus amurus* or *ſal Glauberi*, and ſeems to extend its action further. The wholeſale dealers in medicines have commonly ſubſtituted to it an article otherwiſe almoſt uſeleſs in their ſhops, the reſiduum of Glauber's ſpirit of nitre. This may be looked upon as a venial fraud, if the ſpirit has been prepared as formerly directed, and the reſiduum diſſolved and cryſtallized; but it is a very dangerous one, if the vitriolic acid has been uſed in an over proportion, and the caput mortuum employed without cryſtallization; the ſalt in this caſe, inſtead of a mild neutral one of a moderately bitter taſte, proving highly acid. The purchaſer ought therefore to inſiſt upon the ſalt's being in a cryſtalline form. The cryſtals, when perfect, are oblong, with ſix flat ſides, and terminated at each end by a ſix-ſided pyramid. Some appear compoſed of two pyramids joined together by the baſes, and many, in the moſt perfect cryſtallizations I have ſeen, are very irregular. They decrepitate in the fire, ſomewhat like thoſe of ſea ſalt, for which they have ſometimes been miſtaken.

NITRUM VITRIOLATUM.

Vitriolated nitre.

Lond.

Diſſolve in warm water the maſs which remains after the diſtillation of Glauber's ſpirit of nitre: filter the ſolution through paper, and cryſtallize the ſalt.

This ſalt is not different from the *tartarum vitriolatum*, being compoſed of the vitriolic acid, and the alkaline baſis of nitre; which alkali is no other than the common vegetable fixt alkaline ſalt, as ſalt of tartar or potaſh. It is, in effect, from the aſhes of vegetables, that the nitre prepared in Europe receives its alkaline baſis. If any unchanged nitre remain in the maſs, it is left diſſolved in the water while the vitriolated alkali cryſtallizes.

SAL POLYCHRESTUM.

Salt of many virtues.

Edinb.

Take
Nitre in powder,
Flowers of ſulphur, of each equal parts.
Mingle them well together, and inject the mixture, by little and little at a time, into a red hot crucible. After the deflagration ceaſes, keep the crucible in the fire for an hour. The ſalt may be purified by diſſolving it in warm water, filtering the ſolution, and exhaling it to dryneſs; or by cryſtallization.

This is another method of uniting the vitriolic acid with the common vegetable fixt alkali. Both the nitre and the ſulphur are decompounded in the operation: the acid of the nitre, and the inflammable principle of the ſulphur, detonate together, and are diſſipated; while the acid of the ſulphur (which, as we have already ſeen, is no other than the vitriolic acid) remains combined with the alkaline baſis of the nitre. The ſhops, accordingly, have ſubſtituted to the ſal polychreſt the foregoing preparation.

SAL PRUNELLÆ.

Edinb.

Take of
Pure nitre reduced to powder, two pounds;
Flowers of ſulphur, one ounce.

Melt the nitre in a crucible, and ſprinkle into it the ſulphur by little at a time. When the deflagration is over, pour out the melted ſalt upon a clean, dry, and warm braſs plate, ſo as to form it into cakes.

Those who prepare ſal prunellæ in large quantities, make uſe of a clean iron pot, inſtead of a crucible; and when the nitre is melted, and the ſulphur deflagrated, take out the ſalt with an iron ladle, and pour it into braſs moulds kept for this purpoſe. The previous pounding of the nitre, directed above, may be as well omitted, as occaſioning a needleſs trouble.

This preparation was formerly in great eſteem, and is ſometimes ſtill ordered in preſcription. It is nevertheleſs built upon an erroneous foundation, which ſuppoſed that the nitre was purified by the deflagration it undergoes upon injecting a little ſulphur on it. From proper experiments it appears, that the ſulphur is ſo far from depurating the nitre, or tending to its improvement as a medicine, that it really alters ſome part of it into a ſalt, which has quite different properties. The real effect of this proceſs will be eaſily underſtood from the preceding one: there, nearly all the nitre is decompounded, and a ſalt, not different from vitriolated tartar, is found in its place. Here, only about one twenty-fourth part of it ſuffers this change. Boerhaave, inſtead of deflagrating the nitre with ſulphur, orders it to be only well purified after the common method, and then melted by itſelf and poured into moulds. The fuſion here ſerves to bring the ſalt into a leſs compaſs, by evaporating the aqueous moiſture which had concreted with it in its cryſtallization; though even in this intention it is not of much uſe, the quantity of water, which nitre retains, not being very conſiderable.

SAL CATHARTICUS GLAUBERI.

The cathartic ſalt of Glauber, commonly called ſal mirabile.

Lond.

Diſſolve in warm water the maſs which remains after the diſtillation of ſpirit of ſea ſalt: filter the ſolution, and cryſtallize the ſalt.

Edinb.

If the cryſtals (obtained as above) prove too ſharp, diſſolve them again in water, filter the liquor, and cautiouſly evaporate it to ſuch a pitch only as may diſpoſe the ſalt to cryſtallize.

There is no great danger of the cryſtals proving too ſharp, even when the ſpirit of ſalt is made with the largeſt proportion of oil of vitriol directed under that proceſs. The liquor which remains after the cryſtallization is indeed very acid; and with regard to this preparation, it is convenient it ſhould be ſo; for otherwiſe, the cryſtals will be very ſmall, and likewiſe in a little quantity. Where a ſufficient proportion of oil of vitriol has not been employed in the diſtillation of the ſpirit, it is neceſſary to add ſome to the liquor, in order to promote the cryſtallization of the ſalt.

The title of this ſalt expreſſes its medical virtues. Taken from half an ounce to an ounce, or more, it proves a mild and uſeful purgative; and in ſmaller doſes, largely diluted, a ſerviceable aperient and diuretic. The ſhops frequently ſubſtitute to it the *ſal catharticus amarus*, which is nearly of the ſame quality, but ſomewhat more unpleaſant, and, as is ſaid, leſs mild in operation. They are very eaſily diſtinguiſhable from each other, by the effect of alkaline ſalts upon ſolutions of them. The ſolution of Glauber's ſalt ſuffers no viſible change from this addition, its own baſis being a true fixt alkali: but the ſolution of the *ſal catharticus amarus* grows inſtantly white and turbid, its baſis, which is an earth, being extricated copiouſly by the alkaline ſalt; as in the following proceſs.

MAGNESIA ALBA.
White magneſia.
Edinb.

Diſſolve *ſal catharticus amarus* in a ſufficient quantity of water. Filter the ſolution, and add to it a filtered ley of potaſh, ſo long as a freſh addition continues to occaſion any milkineſs. A white powder will precipitate; which, being ſeparated from the liquor, is to be carefully waſhed in freſh portions both of hot and cold water, and afterwards dried.

This powder appears to be the ſame ſpecies of earth with that obtained from the mother-ley of nitre which was for ſeveral years a celebrated ſecret in the hands of ſome particular perſons abroad. Hoffman, who deſcribes the preparation of the nitrous magneſia, gives it the character of an uſeful antiacid, a ſafe and inoffenſive laxative in doſes of a dram or two, and a diaphoretic and diuretic when given in ſmaller doſes of fifteen or twenty grains. Since his time, it has had a conſiderable place in the practice of foreign phyſicians, and has begun to come into eſteem among us, particularly in heart burns, and for preventing or removing the many diſorders which children are ſo frequently thrown into from a redundance of acid humours in the firſt paſſages. It is preferred, on account of its laxative quality, to the common abſorbents, which (unleſs gentle purgatives are given occaſionally to carry them off) are apt to lodge in the body, and occaſion a coſtiveneſs very detrimental to infants.

Though the preparation of this medicine is now commonly known, its nature and properties are very little underſtood. Whilſt ſome ſuppoſe it to poſſeſs uncommon virtues, others affirm, that when duly edulcorated, it is in no reſpect different from calcined harſhorn, or any other ſimple animal or vegetable earth. The following obſervation of its real properties will be ſufficient to determine this point.

Magneſia alba, when prepared in perfection, is a white and very ſubtile earth, perfectly void of ſmell or taſte, of the claſs of thoſe which diſſolve in acids. It diſſolves freely, even in the vitriolic acid; which in the common way of making ſolutions, takes up only an inconſiderable portion of other earths. Combined with this acid, it forms a bitter ſalt, very eaſily ſoluble in water, while the common abſorbents form with the ſame acid almoſt inſipid concretes, very difficult of ſolution. Solutions of magneſia in all acids are bitter and purgative; while thoſe of the other earths are more or leſs auſtere and aſtringent. A large doſe of the magneſia, if the ſtomach contains no acid to diſſolve it, does not purge or produce any ſenſible effect. A moderate one, if an acid be lodged there, or if acid liquors be taken after it, procures ſeveral ſtools; whereas the common abſorbents, in the ſame circumſtances, inſtead of looſening, bind the belly. It is obvious, therefore, that magneſia is ſpecifically different from the other earths, and that it is applicable to uſeful purpoſes in medicine.

NITRUM CUBICUM.

Cubical nitre.

Diſſolve chalk or lime in purified aquafortis, and add the ſolution by degrees to a ſolution of Glauber's ſalt in water, ſo long as a freſh addition produces any milkineſs: a white powder will precipitate; after which the liquor is to be filtered, and, after due evaporation, ſet to cryſtallize.

In this proceſs, both the ſolutions are decompounded, and two new compounds produced. The vitriolic acid of the Glauber's ſalt unites with the chalk, and forms with it an indiſſoluble ſelenitic concrete, which of courſe precipitates; while the alkali of the Glauber's ſalt, and the nitrous acid, unite into a neutral ſalt, which is ſeparated from the liquor by cryſtallization. The cryſtals are rhomboidal, of a cooling taſte, greatly reſembling that of common nitre. How far this ſalt differs from common nitre in its medical virtue, is not known. The proceſs is here inſerted, partly, as being a very inſtructive one in regard to the tranſpoſitions which happen on the mixture of different ſaline bodies, and partly as affording the moſt convenient means of obtaining the pure alkaline baſis of ſea ſalt. In the diſtillation of ſpirit of ſalt, that baſis was diſunited from its own acid, and combined with the vitriolic: it is here transferred from the vitriolic to the nitrous: and we have before given a method of diſſipating or deſtroying the nitrous acid, and leaving the alkali, that was combined with it, pure.

SPIRITUS SALIS MARINI COAGULATUS.

Spirit of ſea ſalt coagulated.

Lond.

Drop, into Glauber's ſpirit of ſea ſalt, a ley of any fixt alkaline ſalt, till all effervеſcence ceaſes: then evaporate the mixture to dryneſs.

This preparation is inſerted, under the ſame title, in the Wirtemberg pharmacopœia. It has been commonly called regenerated ſea ſalt, though with little propriety, as it differs from that ſalt in its baſis; the common vegetable alkali being here ſubſtituted to the mineral alkali of ſea ſalt. How far it differs from ſea ſalt in its medical qualities, I cannot take upon me to determine. It is manifeſtly ſharper in taſte, and ſomewhat more difficult both of ſolution in water and of fuſion in the fire.

TARTARUS REGENERATUS.

Regenerated tartar.

Edinb.

Put any quantity of dry ſalt of tartar, powdered, into a large glaſs veſſel; and pour thereon, by little and little, as much diſtilled vinegar as is neceſſary to ſaturate it. Filter the the liquor, and exhale it over a very gentle fire, to dryneſs, taking great care that the matter contract not an empyreuma. On the ſalt which remains, pour as much more ſpirit of vinegar as will ſaturate it: then depurate the liquor again, and carefully exſiccate it into a dry ſalt.

If the common alkalies be made uſe of for this proceſs, they ſhould be previouſly purified, by ſolution and cryſtallization, from the neutral ſalt which they generally contain. The diſtilled vinegar muſt be perfectly free from any empyreumatic taint. It is not neceſſary to dephlegmate it, or throw away the firſt runnings in the diſtillation, ſince theſe contain a portion of the acid (the part here wanted) as well as the phlegm.

It is difficult to hit the point of ſaturation betwixt the acetous acid, and the alkaline ſalt. After about fourteen parts of ſtrong diſtilled vinegar have been gradually poured upon one of the fixed ſalt, the addition of a little more of the acid will not occaſion any further effervеſcence in the cold: but, if the mixture be now ſtrongly ſtirred and well heated, the effervеſcence will appear afreſh; upon which ſome more vinegar is to be added, till it again ceaſes. The ſaturation is not as yet complete; for, upon exhaling the aqueous parts, the remaining ſalt ſtill efferveſces with freſh vinegar. When ſo much of the acid has now been added, that no marks of fermentation any longer appear, a little more of the vinegar may be poured in before you proceed to the laſt evaporation. By theſe means, the ſaturation of the alkali will be ſecured, whilſt, if the acid prevail, the ſuperfluous quantity of it will exhale.

The ſalt thus prepared, is of a dark brown colour, a peculiar, not ungrateful odour, a penetrating, ſaponaceous, ſaline taſte, in no wiſe alkaline or acid. Its brown colour, and ſaponaceous quality, proceed from the oily parts of the vinegar; the depuration of the ſalt from this oil, is not in the foregoing proceſs inſiſted on. In the London pharmacopœia, the ſalt is ordered to be purified to perfect whiteneſs, under the title of

SAL DIURETICUS.
Diuretic ſalt.
Lond.

Take a pound of any fixt alkaline ſalt, and boil it, with a very gentle heat, in four or five times its weight of diſtilled vinegar. When the fermentation ceaſes, add more diſtilled vinegar; and proceed with freſh additions thereof, until the vinegar being almoſt evaporated, freſh vinegar will no longer raiſe any fermentation; which generally happens by the time that twenty pounds of diſtilled vinegar have been uſed. Then ſlowly exhale to dryneſs. Melt the remaining impure ſalt for a little time, but not too long, over a gentle fire; then diſſolve it in water, and filter the ſolution through paper. If the melting have been duly performed, the filtered liquor will be limpid and colourleſs as water; but if otherwiſe, of a brown colour. Evaporate the limpid ſolution, with an exceeding gentle heat, in a ſhallow glaſs veſſel, occaſionally ſtirring the ſalt as it dries, that its moiſture may be the ſooner exhaled. Afterwards keep it for uſe in a veſſel very cloſely ſtopt; for it will liquefy by the air.

This ſalt ought to be of perfect whiteneſs; and ſhould totally diſſolve both in water and ſpirit of wine, without leaving any feces. If the ſalt, though ever ſo white, depoſit any feces in ſpirit of wine; the whole of it muſt be diſſolved in that ſpirit, the ſolution filtered, and exſiccated again.

The purification of this ſalt is not a little troubleſome. The operator muſt be particularly careful in melting it, not to uſe too great a heat, or to keep it liquefied too long; a little ſhould be occaſionally taken out, and put into water: and as ſoon as it begins to part freely with its black colour, the whole is to be removed from the fire. In the laſt drying, the heat muſt not be ſo great as to melt it; otherwiſe it will not prove totally ſoluble. If the ſolution in ſpirit of wine be exſiccated, and the remaining ſalt liquefied with a very ſoft fire, it gains the leafy appearance which has procured it the name *terra foliata.*

In the fourth volume of the Memoirs of the correſpondents of the French academy, Mr. Cadet has given a method of making the ſalt white at the firſt evaporation, without the trouble of any further purification. He obſerves, that the brown colour depends upon the oily matter of the vinegar being burnt by the heat commonly employed in the evaporation; and his improvement conſiſts in diminiſhing the heat at the time that this burning is liable to happen. The proceſs he recommends is as follows.

Diſſolve a pound of ſalt of tartar in a ſufficient quantity of cold water, filter the ſolution, and add by degrees as much diſtilled vinegar as will ſaturate it, or a little more. Set the liquor to evaporate in a ſtone-ware veſſel, in a gentle heat not ſo ſtrong as to make it boil: when a pellicle appears on the ſurface, the reſt of the proceſs muſt be finiſhed in a water-bath. The liquor acquires by degrees an oily conſiſtence, and a pretty deep brown colour, but the pellicle or ſcum on the top looks whitiſh, and when taken off and cooled, appears a congeries of little brilliant ſilver-like plates. The matter is to be kept continually ſtirring, till it is wholly changed into this white flaky matter, the complete drying of which is moſt conveniently effected in a warm oven.

We ſhall not take upon us to determine whether the pure or impure ſalt be preferable as medicines; obſerving only, that the latter is more of a ſaponaceous nature, the former more acrid, though ſomewhat more agreeable to the ſtomach. Mr. Cadet reckons the ſalt prepared in his method ſuperior both to the brown and white ſorts made in the common way, as poſſeſſing both the oily quality of the one, and the agreeableneſs of the other, and as being always uniform, or of the ſame power; whereas the others are liable to vary conſiderably, according to the degree of heat employed in the evaporation. They are all medicines of great efficacy, and may be ſo doſed and managed as to prove either mildly cathartic, or powerfully diuretic: few of the ſaline deobſtruents come up to them in virtue. The doſe is from half a ſcruple to a dram or two. A bare mixture of alkaline ſalt and vinegar without exſiccation, is not perhaps much inferior as a medicine to the more elaborate ſalt. I have known two drams of the alkali, ſaturated with vinegar, occaſion ten or twelve ſtools, in hydropic caſes, and a plentiful diſcharge of urine, without any inconvenience.

SPIRITUS MINDERERI.
Spirit of Mindererus.
Edinb.

Take any quantity of the volatile alkaline ſalt of ſal ammoniac, and gradually pour upon it diſtilled vinegar, till the effervеſcence ceaſes; occaſionally ſtirring the mixture, to promote the action of the vinegar on the ſalt.

This is an excellent aperient ſaline liquor. Taken warm in bed, it proves commonly a powerful diaphoretic or ſudorific; and, as it operates without heat, it has place in febrile and inflammatory diſorders, where medicines of the warm kind, if they fail of procuring ſweat, aggravate the diſtemper. Its action may likewiſe be determined to the kidneys, by walking about in a cool air. The common doſe is half an ounce, either by itſelf, or along with other medicines adapted to the intention. Its ſtrength is not a little precarious, depending in great meaſure on that of the vinegar; an inconvenience which cannot eaſily be obviated, for the ſaline matter is not reducible to the form of a concrete ſalt.

SECT. VII.

Anomalous ſalts.

CRYSTALLI TARTARI.
Cryſtals of tartar.
Edinb.

LET powdered white tartar be boiled in twenty times its quantity of water, till perfectly diſſolved; and the ſolution, whilſt it continues hot, paſſed through filtering paper or a woollen cloth, and received in a wooden veſſel; then expoſe it for a night or longer to the cold air, that cryſtals may form themſelves, and ſhoot to the ſides of the veſſel; the water being now poured off, the cryſtals are to be collected and dried for uſe.

The filtration of the ſolution of tartar through paper ſucceeds very ſlowly, and unleſs managed with a good deal of addreſs, not at all: for, as ſoon as the boiling liquor begins to grow ſenſibly leſs hot, it depoſits much of the tartar all over the ſurface of the paper, which hinders the remainder from paſſing through. Zwelffer, in his animadverſions on this proceſs in the Auguſtan pharmacopœia, directs the ſolution to be clarified with whites of eggs, and ſtrained only through a linen cloth; he likewiſe judiciouſly orders the veſſel to be cloſe covered, and the cryſtallization performed in a warm place: for, if the ſolution be ſuffered to cool very faſt, it is vain to expect any appearance of cryſtals; the tartar will inevitably be precipitated to the bottom of the veſſel in the form of ſand. And indeed, the buſineſs of refining and cryſtallizing tartar is ſo very troubleſome, and requires ſo large an apparatus, that ſcarce any of the apothecaries, or even of the trading chemiſts, are at the trouble of it; but either import it ready refined from Holland, or purchaſe it from ſome people here who make it their ſole buſineſs. (See the article Tartar)

CREMOR TARTARI.
Cream of tartar.
Edinb.

Take any quantity of ſolution of tartar, made as in the foregoing proceſs, and paſſed through a filter. Boil it over the fire, till a thick cuticle appear on the ſurface, which is to be taken off with a wooden ſkimmer bored full of holes. Continue the boiling till a freſh cuticle ariſe, which is to be taken off as the foregoing, and the operation repeated till the whole quantity of liquor be thus conſumed. Afterwards dry all the cuticles togegether in the ſun.

This proceſs ſeems inſerted only to retain a name long familiar to the ſhops; for the preparation itſelf in no reſpect differs from cryſtals of tartar reduced to powder. Indeed the purchaſer ought always to prefer the cryſtals; for the powder is often ſophiſticated with ſaline ſubſtances of another kind.

The college of Edinburgh obſerves, that both the cryſtals and cream are brought to us from abroad; that they are not different in quality from one another: and that good white tartar, unrefined, is not inferior to either of them.

TARTARUM SOLUBILE.
Soluble tartar.
Lond.

Diſſolve a pound of any fixt alkaline ſalt in a gallon of boiling water; and gradually throw in cryſtals of tartar, as long as a freſh addition thereof raiſes any efferveſcence; which generally ceaſes before three pounds of the cryſtals have been uſed. Then, filter the liquor, and after due evaporation, ſet it by to cryſtallize; or evaporate it to dryneſs, and keep the remaining ſaline maſs for uſe.

Edinb.

Boil cryſtals of tartar, till they are perfectly diſſolved, in ten times their quantity of water; and gradually drop into the ſolution, whilſt it continues boiling, oil of tartar per deliquium, till the efferveſcence ceaſes. Filter the liquor whilſt hot, and evaporate it till a pellicle appears on the ſurface, that, when removed into a cold place, it may cryſtallize.

Common white tartar is perhaps preferable for this operation to the cryſtals uſually met with (ſee the article Tartar). Its impurities can here be no objection; ſince it will be ſufficiently depurated by the ſubſequent filtration.

The preparation of this medicine by either of the above methods is very eaſy; though ſome chemiſts have rendered it ſufficiently troubleſome, by a nicety that is not at all wanted. They inſiſt upon hitting the very exact point of ſaturation betwixt the alkaline ſalt and the acid of the tartar; and caution the operator to be extremely careful, when he comes near this mark, leſt by imprudently adding too large a portion of either, he render the ſalt too acid, or too alkaline. If the liquor be ſuffered to cool a little before it is committed to the filter, and then properly exhaled and cryſtallized, no error of this kind can happen, though the ſaturation ſhould not be very exactly hit: for ſince cryſtals of tartar are very difficultly ſoluble even in boiling water, and when diſſolved therein, concrete again upon the liquor's growing cold; if any more of them has been employed, than is taken up by the alkali, this ſuperfluous quantity will be left upon the filter: and, on the other hand, if too much of the alkali has been made uſe of, it will remain uncryſtallized. The cryſtallization of this ſalt indeed cannot be effected without a good deal of trouble: it is therefore moſt convenient to let the acid ſalt prevail at firſt, to ſeparate the ſuperfluous quantity, by ſuffering the liquor to cool a little before filtration, and then proceed to the total evaporation of the aqueous fluid, which will leave behind it the neutral ſalt required. The moſt proper veſſel for this purpoſe is a ſtone-ware one; iron diſcolours the ſalt.

Soluble tartar, in doſes of a ſcruple, half a dram, or a dram, is a mild cooling aperient: two or three drams commonly looſen the belly; and an ounce proves pretty ſtrongly purgative. Malouin ſays it is equal in purgative virtue to the cathartic ſalt of Glauber. It is an uſeful addition to the purgatives of the reſinous kind, as it promotes their operation, and at the ſame time tends to correct their griping quality. But it muſt never be given in conjunction with any acid, for all acids decompound it; abſorbing its alkaline ſalt, and precipitating the tartar.

SAL RUPELLENSIS.

Sal de Seignette, or Rochel ſalt.

Pharm. Pariſ.

Let the ſalt extracted from the aſhes of the kelp or kali of Alicant be calcined till it melts, then diſſolved in water, the ſolution filtered, and, after due evaporation, ſet by, that the ſalt may ſhoot into pure white cryſtals. Diſſolve cryſtals of tartar in boiling water, and ſaturate the ſolution with the cryſtals of kali. The proportions neceſſary for this purpoſe will be about ſixteen ounces of the latter to twenty of the former. Duly exhale the liquor in the heat of a water-bath, and, after filtration, ſet it in the cold to cryſtallize.

This is a ſpecies of ſoluble tartar, made with the ſalt of kali or ſoda, which is the ſame with the mineral alkali or baſis of ſea ſalt. It cryſtallizes far more eaſy than the preceding preparation, and does not, like it, grow moiſt in the air. It is alſo conſiderably leſs purgative, but is equally decompounded by acids. It appears to be a very elegant ſalt, and has begun to come into eſteem in this country, as it has long in France.

SAL ESSENTIALE ACETOSÆ.

Eſſential ſalt of ſorrel.

Edinb.

Let the juice of ſorrel, after ſettling and decantation from the feces, be evaporated, till only one-third remains, then ſtrained through a flannel bag, and exhaled again till a pellicle appears upon the ſurface. Put the liquor into a glaſs veſſel, and, a little olive oil being poured upon the top, ſet it by in a cellar till plenty of cryſtals are formed. Theſe are to be gently waſhed with water, and afterwards dried.

After the ſame manner, eſſential ſalts are obtained from all acid, auſtere, aſtringent, and bitteriſh plants that contain but a ſmall quantity of oil.

Herbs of a dry nature are to be moiſtened, in the bruiſing, with a little water, that the juice may be the more eaſily preſſed out.

The waters of theſe plants, which are in vain endeavoured to be drawn over by diſtillation, may be obtained by diſſolving a ſuitable quantity of their eſſential ſalts in common water.

Some pharmaceutical writers direct the plants to be gathered early in the morning; but this is of very little moment. In order to make the ſubject yield its juice readily, it ſhould be chopt to pieces, and well bruiſed in a marble mortar, before it is committed to the preſs. The magma which remains in the bag, ſtill containing no inconſiderable quantity of ſaline matter, may be advantageouſly boiled in water, and the decoction added to the expreſſed juice. The whole may be afterwards depurated together, either by the method before directed, or by running the liquor ſeveral times through a linen cloth. In ſome caſes, the addition of a conſiderable portion of water is neceſſary; that the juice, thus diluted, may part the more freely from its feculencies; on the ſeparation of which, the ſucceſs of the proceſs in great meaſure depends.

The evaporation ſhould be performed either in ſhallow glaſs baſons, or in ſuch earthen ones as are of a compact cloſe texture; ſuch are thoſe uſually called ſtoneware. The common earthen veſſels are ſubject to have their glazing corroded, and are ſo extremely porous, as readily to imbibe and retain a good quantity of the liquor. Metallic veſſels are particularly apt to be corroded by theſe acid kinds of juices.

The directions for the time of diſcontinuing the ſecond evaporation are not ſo eaſily obſerved as one could wiſh. Theſe juices are ſo viſcid, and abound ſo much with heterogene matter, of a quite different nature from any thing ſaline, that a pellicle, or pure ſaline incruſtation upon the ſurface, is in vain expected. Boerhaave therefore, and the more expert writers in pharmaceutical chemiſtry, with great judgment, direct the evaporation of the ſuperfluous moiſture to be continued until the matter has acquired the conſiſtence of cream. If it be now ſuffered to ſtand for an hour or two in a warm place, it will, notwithſtanding the former depurations, depoſit a freſh ſediment, from which it ſhould be warily decanted, before it is put into the veſſel in which it is deſigned to be cryſtallized.

Some recommend an unglazed earthen veſſel, as preferable for this purpoſe to a glaſs one; the ſmoothneſs of the latter being ſuppoſed to hinder the ſalt from ſticking thereto; whilſt the juice, eaſily inſinuating itſelf into the pores of the former, has a great advantage of ſhooting its ſaline ſpicula to the ſides. Others ſlightly incruſtate the ſides and bottom of whatever veſſel they employ, with a certain mineral ſalt, which greatly diſpoſes the juice to cryſtallize, to which of itſelf it is very averſe: but as this addition is, with regard to its medical virtue, quite different from the ſalt here intended, we forbear to mention it.

The uſe of the oil is to preſerve the juice uncorrupted, and to prevent it from running into fermentation or putrefaction, during the great length of time which this proceſs requires. As much oil as will fully cover the ſurface of the liquor, is ſufficient for this purpoſe. The waſhing of the cryſtals is intended to cleanſe them from the mucilaginous feculencies which adhere to them. It ought to be performed with the utmoſt caution, to prevent any of the ſalt itſelf from being diſſolved. The liquor which remains after the cryſtallization may be depurated by a gentle colature, and after due inſpiſſation ſet to ſhoot again; when a further yield of cryſtals will be obtained.

The proceſs for obtaining theſe ſalts is very tedious, inſomuch as ſcarce to be compleated in leſs than ſeven or eight months; and the quantity of ſalt which the juices afford, is extremely ſmall. Hence they are hardly ever made or expected in the ſhops. The chemiſts have contrived ſeveral methods for expediting the proceſs, among which the two following ſeem the moſt remarkable.

Take any quantity of wormwood, carduus benedictus, or the like plants, gently dried in the ſhade. Pour thereon a ſuitable portion of ſpirit of wine, and digeſt them together with a ſoft heat, till the menſtruum has acquired a green colour. This tincture is to be put into a glaſs cucurbit, and diſtilled with the heat of a water-bath, till ſo much of the ſpirit be come over, as that the remainder may be left of the conſiſtence of honey. The whole being now ſuffered to remain unmoved till grown perfectly cold, beautiful pyramidal cryſtals will be found to have ſhot from the ſides of the diſtilling veſſel towards its center. *Spieſſius, in Miſcell. Berolin. continuat.* ii. p. 91, 92.

This gentleman relates likewiſe, that having made an eſſence (that is, a ſaturated tincture) of elecampane roots, with ſpirit of wine, and kept it unmoved for a year, he found a great number of cryſtals ſhot from the bottom of the glaſs upwards, of the thickneſs of a quill, and about an inch long. The cryſtals obtained by this method are ſaid to be of the nitrous kind, but of a more ſubtile taſte than the common nitre, impreſſing only an agreeable coolneſs upon the tongue.

The ſecond proceſs is from the celebrated Dr. Stahl.

Take wormwood, brooklime, pellitory, mercury, ſoapwort, or any other plants of the ſame kind, dried quick in a ſhady place. Cut the herb ſmall, and pour thereon a ſufficient quantity of highly-rectified ſpirit of wine: digeſt them together, till the menſtruum becomes ſaturated with the oil, or reſinous parts of the plant; then pour off the tinged liquor, add a freſh parcel of ſpirit, and digeſt as before, continuing to add more of the menſtruum, till ſuch time as it no longer extracts any colour from the vegetable. The plant, thus freed from its oily matter, is to be gently exſiccated, and boiled in water, till the liquor has taken up its ſaline parts. The decoction being then paſſed through a filter, afterwards evaporated to a due conſiſtence, and ſet by in a cool place, will ſhoot into ſaline cryſtals, which, on examination, prove manifeſtly nitrous. *Stahlii fund. chem.* pag. 68, *et alibi.*

The two foregoing proceſſes agree but ill with each other: how far they are adequate to the purpoſes intended by them, has not yet been ſufficiently examined. It is certain, that ſpirit of wine diſſolves the ſubtile oils and the reſins of vegetables, which prove a great impediment to the cryſtallization of ſalts; whence it ſhould ſeem that the ſalt might afterwards be prepared by water from the reſiduum to much better advantage. But it is certain alſo, that this menſtruum diſſolves ſome of the native vegetable ſalts themſelves; and that, if the tincture be ſufficiently loaded with the ſoluble parts of the ſubject, the ſalt ſeparates, while the oily and reſinous matter remain diſſolved. Thus manna, an eſſential ſalt of the ſweet kind, diſſolves totally in rectified ſpirit, and, however foul before, is recovered white as ſnow, its oily impurities being left in the menſtruum; and thus ſpirituous tinctures of celery, beet roots, and other plants of the ſweet kind, depoſit, on ſtanding, true ſaccharine concretions. It is probable that one proceſs is beſt adapted to ſome plants, and the other to others: the firſt doubtleſs is for thoſe of the ſweet kind, and the ſecond for acid herbs, as ſorrel and woodſorrel.

The virtues of the eſſential ſalts have not been ſufficiently determined from experience. Thus much, however, is certain, that they do not, as has been ſuppoſed, poſſeſs the virtues of the ſubjects entire, excepting only the acids and ſweets. The others ſeem to be, almoſt all of them, nearly ſimilar, from whatever plant they were obtained. In watery extracts of wormwood, carduus, chamomile, and many other vegetables, kept for ſome time in a ſoft ſtate, I have often obſerved fine ſaline efflorefcences on the ſurface, which had all nearly the ſame taſte, ſomewhat of the nitrous kind. They are ſuppoſed by ſome to be at bottom no more than an impure ſpecies of volatile nitre (that is, a ſalt compoſed of the nitrous acid and volatile alkalies). Thoſe which were examined by the chemiſts of the French academy, deflagrated in the fire, and, being triturated with fixt alkalies, exhaled an urinous odour; plain marks of their containing thoſe two ingredients.

SACCHARUM LACTIS.

Sugar of milk.

Pharm. Pariſ.

Take common whey of cows' milk, made with calves' rennet. Clarify it with whites of eggs; and if it be not perfectly limpid, paſs it through a filter. Then evaporate it, in a glaſs veſſel, in the heat of the water-bath, and ſet it by in a cellar to cryſtallize. The cryſtals are to be waſhed with cold water.

THIS preparation has been greatly celebrated in diſorders of the breaſt, but is far from anſwering what has been expected from it. It has little ſweetneſs, and is difficult of ſolution in water. A ſaline ſubſtance, much better deſerving the name of ſugar, may be obtained by evaporating new milk, particularly that of the aſs, to dryneſs, digeſting the dry matter in water till the water has extracted its ſoluble parts, and then inſpiſſating the filtered liquor. This preparation is of great ſweetneſs, though neither white nor cryſtalline: nor is it perhaps in the pure cryſtallizable parts of milk that its medicinal virtues lie.

FLORES BENZOINI.

Flowers of benzoine.

Lond.

Put ſome powdered benzoine into an earthen pot placed in ſand; and, with a gentle heat, ſublime the flowers into a conical paper cap fitted to the pot.

Or, the ſublimation may be performed in a retort; the flowers will ariſe with a ſoft heat, into the neck.

If the flowers have any yellow tinge, mix them with tobacco-pipe clay, and ſublime again.

Edinb.

The ſublimation is to be performed in a glazed earthen pot, and repeated in the ſame utenſils with freſh parcels of benzoine, till the paper cap becomes foul with oil.

Benzoine, expoſed in a retort to a gentle fire, melts, and ſends up into the neck white, ſhining, cryſtalline flowers, which are followed by an oily ſubſtance. On raiſing the heat a little (a recipient being applied to the neck of the retort) a thin yellowiſh oil comes over, intermingled with an acid liquor, and afterwards a thick butyraceous ſubſtance; this laſt, liquefied in boiling water, gives out to it a conſiderable quantity of ſaline matter (ſeparable by filtration and proper exhalation) which appears in all reſpects ſimilar to the flowers.

It appears therefore, that the whole quantity of flowers which benzoine is capable of yielding, cannot be obtained by the above proceſſes, ſince a conſiderable portion ariſes after the time of their being diſcontinued: that greateſt part of the flowers ariſes with a leſs degree of heat than what is neceſſary to elevate the oil: but that, if the operation be haſtily conducted, or if the fire be not exceeding gentle, the oil will ariſe along with the flowers, and render them foul. Hence, in the way of trade, it is extremely difficult to prepare them of the requiſite whiteneſs and purity; the heat which becomes neceſſary, when large quantities of the benzoine are employed, being ſo great as to force over ſome of the oil along with them.

In order therefore to obtain theſe flowers in perfection, only a ſmall quantity of benzoine ſhould be put into the veſſel at a time; and, that this may not be any impediment to the requiſite diſpatch, a number of ſhallow, flat-bottomed, earthen diſhes may be employed, each fitted with another veſſel inverted over it. With theſe you may fill a ſand-furnace; having freſh diſhes charged in readineſs to replace thoſe in the furnace, as ſoon as the proceſs ſhall appear finiſhed in them: the reſiduum of the benzoine ſhould be ſcraped out of each of the veſſels, before a freſh parcel is put in.

Theſe flowers, when made in perfection, have an agreeable taſte and fragrant ſmell. They totally diſſolve in ſpirit of wine; and likewiſe, by the aſſiſtance of heat, in water; but ſeparate again from the latter upon the liquor's growing cold, ſhooting into ſaline ſpiculæ, which unite together into irregular maſſes. By the mediation of ſugar they remain ſuſpended in cold water, and thus form an elegant balſamic ſyrup. Some have held them in great eſteem, as pectoral and ſudorific, in the doſe of half a ſcruple or more. But the preſent practice rarely makes uſe of them, on account of the offenſive oil, with which, as uſually prepared, they are tainted, and from which a freſh ſublimation from tobacco-pipe clay does not free them ſo effectually as might be wiſhed. The obſervations before related, point out a method of depurating them more perfectly, viz. by ſolution, filtration, and cryſtallization.

Sal sedativus.

Salt of borax, called ſedative ſalt.

Put eight ounces of powdered borax into a wide-necked retort; pour thereon three ounces of water; and then add three ounces of oil of vitriol. Place the retort in a proper furnace, adapt to it a receiver, and increaſe the fire till the veſſel becomes red hot. The ſedative ſalt will ariſe into the neck, in form of thin ſhining plates, which are to be ſwept out with a feather: and a little liquor will paſs into the receiver. When the matter in the retort is grown cool, pour back upon it the diſtilled liquor, and ſublime again. Repeat this proceſs ſo long as the borax continues to yield any conſiderable quantity of ſaline flowers.

Or,

Diſſolve the borax in a ſufficient quantity of warm water, and add thereto the oil of vitriol. Evaporate this mixture, till thin plates begin to appear upon the ſurface; then ſuffer the fire to decay, and let the veſſel ſtand unmoved, till plenty of cryſtals are formed; which are to be well rinſed with cold water, and then dried for uſe.

In the preparation of this ſalt by ſublimation, the fire muſt be expeditiouſly raiſed when the matter begins to grow dry, for it is only at this period that the ſalt ſublimes. The ſublimed ſalt itſelf, in a perfectly dry ſtate, proves fixt in the fire. If moiſtened with water, and then expoſed to a ſmart heat, part of it continues to riſe, till the moiſture is wholly exhaled; after which, nothing more can be forced up by heat, till the ſalt is again moiſtened. Hence the uſe of returning the diſtilled liquor, and repeating the ſublimations. Lemery ſays, he found flowers continue to riſe till the thirty ſixth ſublimation; and that the quantity obtained by all theſe ſublimations amounted to half an ounce and thirty-five grains, from two ounces of borax.

The part of the borax which does not ſublime, appears to be the ſame (when the common refined borax of the ſhops is made uſe of) with the alkaline ſalt of the ſea ſalt. The ſedative ſalt, united with that alkali, recompoſes borax again. The extrication of the ſedative ſalt from the borax happens, on the ſame principle as that of the marine acid from ſea ſalt, viz. the vitriolic acid uniting with the alkali; and the reſiduum is in both caſes the ſame, viz. the ſalt called ſal mirabile, or Glauber's ſalt. The ſedative ſalt may be extricated alſo from borax by other acids, but moſt commodiouſly and effectually by the vitriolic.

The proceſs by cryſtallization is leſs troubleſome than that by ſublimation; but the ſalt proves generally leſs white, and is apt likewiſe to retain a part of the Glauber's ſalt, eſpecially if the evaporation be too long protracted.

The ſedative ſalt appears to the taſte a neutral ſalt; but, examined with alkalies, has the properties of an acid, effervеſcing, uniting, and cryſtallizing with them, and deſtroying their alkaline quality. It diſſolves both in water and in ſpirit of wine: though not very readily in either. As to its virtues, it is ſuppoſed to be a mild anodyne, (whence its name), to calm the heat of the blood in burning fevers, to prevent or remove delirious ſymptoms, and allay ſpaſmodic affections, whether hypochondriacal or hyſterical, at leaſt for a time. The doſe is from two to eighteen grains, in any proper liquor.

SPIRITUS, SAL, ET OLEUM SUCCINI.

Spirit, ſalt, and oil of amber.

Lond.

Diſtil amber in a ſand-heat gradually increaſed. There will come over a ſpirit, an oil, and a ſalt fouled with the oil.

The oil diſtilled again by itſelf, is divided into a thinner oil which ariſes; and a thicker part that remains behind, called balſam of amber.

The ſalt is to be boiled in the diſtilled ſpirit, or in common water, and ſet to cryſtallize; by theſe means it is freed from its adhering oil. The oftener this is repeated, the purer it will be.

Edinb.

Mix powdered white amber with thrice its weight of clean ſand, and put them into a glaſs retort, of which the mixture may fill one half: then adapt a large receiver, and diſtil in a ſand-furnace, with a fire gradually increaſed. At firſt a ſpirit will come over, with ſome yellow oil; then more yellow oil, along with a little ſalt; and, upon raiſing the heat, more of the ſalt, with a reddiſh coloured oil.

When the diſtillation is finiſhed, empty the liquor out of the receiver; and, having collected together the ſalt which adheres to the ſides, dry it by gentle preſſure between the folds of ſome ſpongy paper.

The oil may be ſeparated from the ſpirit by filtration: and afterwards rectified by diſtilling it from brine of ſea ſalt.

The ſalt is to be rectified in the following manner. Grind it well with twice its quantity of ſea ſalt, and put the mixture into a ſmall and narrow glaſs cucurbit. Fit on a blind-head, and proceed to ſublimation in a ſand-heat, taking care that the oil does not riſe. When the veſſels are grown cold, ſweep out the ſalt with a feather.

In the diſtillation of amber, the fire muſt for ſome time be continued gentle, ſcarce exceeding the degree at which water boils, till the aqueous phlegm and thin oil have ariſen; after which it is to be ſlowly increaſed. If the fire were urged haſtily, the amber would ſwell up, and riſe in its whole ſubſtance into the receiver, without undergoing the required decompoſition or ſeparation of its parts. When ſand or ſimilar intermedia are mixed with it, it is leſs ſubject to this rarefaction, and the fire may be raiſed ſomewhat more expeditiouſly; though this little advantage is perhaps more than counterbalanced by the room which the ſand takes up in the retort.

Our chemiſts generally leave the receiver unluted, that it may be occaſionally removed as the ſalt riſes and concretes in the neck of the retort, whence it is every now and then ſcraped out to prevent the oil from carrying it down into the receiver. When a groſs thick oil begins to ariſe, and no more ſalt appears, the diſtillation is ſtopt, though it might, perhaps, be continued longer to advantage.

Mr. Pott informs us (in a curious diſſertation on the ſalt of amber, publiſhed in the ninth volume of the Memoirs of the academy of ſciences of Berlin) that the Pruſſian workmen, who prepare large quantities of the ſalt for exportation, from cuttings and ſmall pieces of amber, perform the diſtillation without any intermedium, and in an open fire: that ſweeping out the ſalt from the neck of the retort being found too troubleſome, they ſuffer the oil to carry it down into the receiver, and afterwards ſeparate it by means of bibulous paper, which imbibes the oil, and leaves the ſalt dry; which paper is afterwards ſqueezed and diſtilled: that they continue the diſtillation till all that can be forced over has ariſen, with care only to catch the laſt thick oil in a ſeparate receiver; and that from this they extract a conſiderable quantity of ſalt, by ſhaking it in a ſtrong veſſel with three or four freſh portions of hot water, and evaporating and cryſtallizing the filtered waters.

The ſpirit of amber ſo called, is no more than a ſolution of a ſmall portion of the ſalt in phlegm or water; and therefore is very properly employed for diſſolving the ſalt in order to its cryſtallization.

The ſalt, freed from as much of the oil as ſpongy paper will imbibe, retains ſo much as to appear of a dark brown colour. Mr. Pott ſays, the method he has found to ſucceed beſt, and with leaſt loſs, is, to diſſolve the ſalt in hot water, and put into the paper, through which the ſolution is to be filtered, a little cotton ſlightly moiſtened with oil of amber: this, he ſays, detains a good deal of the oil of the ſalt, and the ſolution paſſes through the more pure. The liquor being evaporated with a very gentle fire, as that of a water-bath, and ſet to ſhoot, the firſt cryſtals prove tranſparent, with a ſlight yellowiſh tinge; but thoſe which follow are brown, oily, and bitter, and are therefore to be further depurated in the ſame manner. The whole quantity of cryſtals amounts to about one-thirtieth of the weight of the crude amber employed. By ſublimation from ſea ſalt, as directed before, the ſalt is more perfectly and more expeditiouſly purified. Mr. Pott objects to ſublimation, that a part of the ſalt is decompoſed by it, a coaly matter being left behind, even though the ſalt was previouſly purified by cryſtallization. It may be preſumed, however, that this coal proceeds rather from the burning of ſome remains of the oily matter, than from the decompoſition of any part of the true ſalt.

Pure ſalt of amber has a penetrating, ſubaſtringent, acid taſte. It diſſolves, both in water and in rectified ſpirit; though not readily in either, and ſcarcely at all in the latter without the aſſiſtance of heat. Of cold water in ſummer, it requires for its ſolution about twenty times its own weight, of boiling water only about twice its weight. Expoſed in a glaſs veſſel, to a heat a little greater than that of boiling water, it firſt melts, then riſes in a white fume, and concretes again in the upper part of the glaſs, into fine white flakes, leaving, unleſs it was perfectly pure, a little coaly matter behind. It effervеſces with alkalies both fixt and volatile, and forms with them neutral compounds, greatly reſembling thoſe compoſed of the ſame alkalies and vegetable acids. Mixed with acid liquors, it makes no ſenſible commotion. Ground with fixt alkaline ſalts, it does not exhale any urinous odour. By theſe characters, it is conceived, this ſalt may be readily diſtinguiſhed from all the other matters that have been mixed with, or vended for it. With regard to its virtue, it is accounted aperient, diuretic, and, on account of its retaining ſome portion of the oil, antihyſteric. Boerhaave gives it the character of *diureticorum et antihyſtericorum princeps.* Its great price, however, has prevented its coming much into uſe; and perhaps its real virtues are not equal to the opinion generally entertained of them.

The rectified oil has a ſtrong bituminous ſmell, and a pungent, acrid taſte. Given in a doſe of ten or twelve drops, it heats, ſtimulates, and promotes the fluid ſecretions. It is chiefly celebrated in hyſterical diſorders, and in deficiencies of the uterine purgations. Sometimes it is uſed externally, in liniments for weak or paralytic limbs, and rheumatic pains. This oil differs from all thoſe of the vegetable kingdom, and agrees with the mineral petrolea, in not being ſoluble, either in its rectified or unrectified ſtate, by ſpirit of wine, fixt alkaline lixivia, or volatile alkaline ſpirits; the oil, after long digeſtion or agitation, ſeparating as freely as common oil does from water.

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CHAPTER IX.

Preparations of Sulphur.

FLORES SULPHURIS.

Flowers of ſulphur.

Lond.

Sublime ſulphur in proper veſſels; and reduce the flowers, that concrete, into powder, either in a wooden mill, or in a marble mortar with a wooden peſtle.

Edinb.

Put any quantity of yellow ſulphur, groſsly powdered, into an earthen cucurbit placed in a ſand-furnace; and, having fitted on a glaſs blind-head, or inverted upon it another earthen cucurbit, begin the ſublimation with a gentle heat, which may be afterwards increaſed. The flowers will riſe into the uppermoſt part of the veſſels, whence they are to be ſwept out and carefully waſhed with very hot water.

This proceſs is rarely attempted by the apothecaries, a large apparatus being neceſſary for performing it to advantage. Thoſe who prepare the flowers of brimſtone in quantity, uſe for the ſubliming veſſel a large iron pot, capable of holding two or three hundred weight. This communicates with an arched chamber, lined with glazed tiles, which ſerves for the recipient.

This preparation of ſulphur makes no change in its qualities; only ſeparating its impurities, and at the ſame time reducing it into a finer powder than it can eaſily be brought to by other means. At the bottom of the ſubliming veſſel there remains a ponderous grey-coloured maſs, compoſed of ſand, earth, ſtony, and ſometimes metallic matters, with a ſmall portion of ſulphur that has eſcaped the ſubliming heat. This is uſually broken in pieces, and vended in the ſhops under the name of ſulphur vivum.

FLORES SULPHURIS LOTI.

Waſhed flowers of ſulphur.

Lond.

Pour upon the flowers as much water as will riſe to the height of four fingers above them, and boil them for ſome time. Then, pouring off this water, let ſome cold water be added, and thoroughly waſh the flowers; after which they are to be dried for uſe.

As the flowers of ſulphur are generally ſublimed into very capacious rooms, which contain a large quantity of air, or in veſſels not perfectly cloſe; ſome of thoſe that ariſe at firſt, are apt to take fire, and thus are changed into a volatile acid vapour, which, mingling with the flowers that ſublime afterwards, communicates to them a notable degree of acidity. In ſuch caſe the ablution here directed is for the general uſe of the medicine abſolutely neceſſary: for the flowers, thus tainted with acid, ſometimes occaſion gripes, and may, in other reſpects, be productive of effects different from thoſe of pure ſulphur. The Edinburgh college, as appears in the foregoing proceſs, allow only the waſhed flowers to be kept in the ſhops. There are, however, ſome particular combinations, to which they are ſuppoſed to be better adapted when unwaſhed, as their union with mercury into æthiops mineral; and accordingly for that preparation the unwaſhed flowers are directed by the London college.

BALSAMUM SULPHURIS SIMPLEX.

Simple balſam of ſulphur.

Lond.

Boil flowers of ſulphur, with four times their weight of oil olive, in a pot lightly covered, until they unite into the conſiſtence of a balſam.

BALSAMUM SULPHURIS CRASSUM.

Thick balſam of ſulphur.

Edinb.

Take of
Oil of olives, eight ounces;
Flowers of ſulphur, one ounce.

Boil them together, in a ſufficiently large iron veſſel, over a gentle fire, keeping them continually ſtirring, till they come to the conſiſtence of a balſam.

LINSEED oil more readily diſſolves ſulphur than oil olive, and the preparation made with it is reckoned ſomewhat leſs diſagreeable. The veſſel they are boiled in ought to be capable of holding at leaſt three times the quantity of the ingredients. As ſoon as the oil begins to act upon the ſulphur, which happens nearly at the point of ebullition, the mixture rarifies very much, ſo as, if not prudently removed from the fire, to run over into the furnace; and, as the matter is very ſuſceptible of flame, dangerous conſequences may enſue, eſpecially if the quantity be large. The operator ought therefore to be upon his guard in the management of this proceſs.

BALSAMUM SULPHURIS BARBADENSE.

Balſam of ſulphur with Barbadoes tar.

Lond.

This is made after the ſame manner as the foregoing, by uſing Barbadoes tar inſtead of the oil.

BALSAMUM SULPHURIS TEREBINTHINATUM.

Balſam of ſulphur with oil of turpentine.

Edinb.

Take two ounces of waſhed flowers of ſulphur, and ſix ounces of oil of turpentine.

Digeſt them together, in a ſand-heat, till the oil be ſaturated with the ſulphur.

BALSAMUM SULPHURIS ANISATUM.

Balſam of ſulphur with oil of aniſeed.

Edinb.

Take two ounces of waſhed flowers of ſulphur; ſix ounces of oil of turpentine; and four ounces of eſſential oil of aniſeeds.

Digeſt them together as in the preceding proceſs.

THESE preparations are more conveniently and ſafely made in a tall glaſs body, with the mouth at leaſt an inch in diameter, than in the circulatory or cloſe veſſels in which they have commonly been directed to be prepared. For, when the ſulphur and oil begin to act vehemently upon each other, they not only rarify into a large volume, but likewiſe throw out impetuouſly great quantities of an elaſtic vapour, which, if the veſſels be cloſed, or the orifices not ſufficient to allow it a free exit, infallibly burſt them. Hoffman relates a very remarkable hiſtory of the effects of an accident of this kind. In the veſſel before recommended, the proceſs may be completed, without danger, in four or five hours, by duly managing the fire; which ſhould be very gentle for ſome time, and afterwards increaſed ſo as to make the oil juſt bubble or boil, in which ſtate it ſhould be kept till all the ſulphur appears to be taken up.

Eſſential oils employed as menſtrua for ſulphur, undergo a great alteration from the degree of heat neceſſary for enabling them to diſſolve the ſulphur; and hence the balſams have not near ſo much of their flavour as might be expected. It ſhould therefore ſeem more eligible to add a proper quantity of the eſſential oil to the ſimple balſam; theſe readily incorporate by a gentle warmth, if the veſſel be now and then ſhaken. Sixteen parts of eſſential oil, and ſix of the balſamum ſulphuris craſſum, compoſe a balſam more elegant than thoſe made in the foregoing manner, and which retains ſo much of the flavour of the oil, as is in ſome meaſure ſufficient to cover the taſte of the ſulphur, and render it ſupportable.

The balſams of ſulphur have been ſtrongly recommended in coughs, conſumptions, and other diſorders of the breaſt and lungs. But the reputation which they have had, in theſe caſes, does not appear to have been built upon any fair trial, or experience of their virtues. They are manifeſtly hot, acrimonious, and irritating; and therefore ſhould be uſed with the utmoſt caution. They have frequently been found to injure the appetite, offend the ſtomach and viſcera, parch the body, and occaſion thirſt and febrile heats. The doſe of the ſimple balſam is from ten to forty drops: thoſe with eſſential oils are not given in above half theſe quantities. Externally, they are employed for cleanſing and healing foul running ulcers. Boerhaave conjectures, that their uſe in theſe caſes gives occaſion to the virtues aſcribed to them when taken internally.

HEPAR SULPHURIS.

Liver of ſulphur.

Edinb.

Take three ounces of flowers of ſulphur; and one ounce and a half of powdered ſalt of tartar. Melt the ſulphur in an earthen diſh, under a chimney, and add to it by degrees the ſalt of tartar; keeping the matter conſtantly ſtirring with a ſpatula till it has acquired a red colour. Care muſt be had to prevent its taking fire.

It is much more convenient to melt the ſulphur firſt by itſelf, and add the ſalt of tartar by degrees, as here directed; than to grind them together, and afterwards endeavour to melt them as ordered in former editions: for in this laſt caſe, the mixture will not flow ſufficiently thin to be properly united by ſtirring; and the ſulphur either takes fire, or ſublimes in flowers, which probably has been the reaſon why ſo large a proportion of it has been commonly directed. Even in the preſent method a conſiderable part of the ſulphur will be diſſipated; and if it were not, the hepar would not be of its due quality: for one part of ſulphur requires two of the alkaline ſalt, to render it perfectly ſoluble in water, which this preparation ought to be.

The hepar ſulphuris has a fetid ſmell, and a nauſeous taſte. Solutions of it in water, made with ſugar into a ſyrup, have been recommended in the ſame intentions as the balſams above-mentioned: our pharmacopœias nevertheleſs have deſervedly rejected this ſyrup, as common practice has almoſt done the balſams. The hepar, digeſted in rectified ſpirit of wine, imparts a rich gold colour, a warm, ſomewhat aromatic taſte, and a peculiar, not ungrateful ſmell. A tincture of this kind is kept in the ſhops, under the name of another mineral.

SULPHUR PRÆCIPITATUM.

Precipitated Sulphur.

Lond.

Boil flowers of ſulphur in water, with thrice their weight of quicklime, till the ſulphur be diſſolved. Filter the ſolution, and drop into it ſome of the weak ſpirit of vitriol: this will throw down a precipitate, which is to be waſhed in freſh portions of water, till it become inſipid.

LAC SULPHURIS.

Edinb.

Boil the hepar ſulphuris, reduced to powder, in four times its quantity of water, for three hours; adding more water if there be occaſion. Then filter the ſolution whilſt hot, and drop into it ſpirit of vitriol, till the efferveſcence ceaſes; a powder will be precipitated to the bottom, which is to be waſhed with hot water, and afterwards dried for uſe.

The method of preparing this lac, as it is called, with hepar ſulphuris, is the moſt expeditious, and leaſt troubleſome, provided the hepar be well made: and on the other hand, quicklime gives the preparation a more ſaleable whiteneſs. Some have been accuſtomed to add to the quicklime a portion of alkaline ſalt, with a view to promote its diſſolving power.

The medicine is nearly the ſame in both caſes. It would be exactly the ſame, if the precipitation were performed with any other acid than the vitriolic: for this acid forms with the diſſolved lime a ſelenitic concrete, which precipitates along with the ſulphur, and is not afterwards ſeparable by any ablution; whilſt the neutral ſalt, which the acid forms with the fixt alkali of the hepar, may be totally diſſolved, and waſhed off by repeated ablution with hot water; and the combinations of all the other acids, both with the lime and alkali, are ſeparated by cold water. It is probably to the admixture of the white ſelenitic matter, reſulting from the vitriolic acid and lime, that the finer colour of the preparation made with lime is owing.

Pure lac ſulphuris is not different in quality from pure ſulphur itſelf; to which it is preferred, in unguents, &c. only on account of its colour. The whiteneſs does not proceed from the ſulphur's having loſt any of its parts in the operation, or from any new matter ſuperadded: for, if common ſulphur be ground with alkaline ſalts, and ſet to ſublime, it ariſes of a like white colour, the whole quantity of alkali remaining unchanged; and, if the lac be melted with a gentle fire, it returns into yellow ſulphur again.

It may be obſerved, that the name *lac ſulphuris*, or milk of ſulphur, applied among us to the precipitate, is by the French writers confined to the white liquor before the precipitate has fallen from it.

TINCTURA SULPHURIS VOLATILIS.

Volatile tincture of ſulphur.

Take of
Flowers of ſulphur, ſix ounces;
Sal ammoniac, one pound;
Quicklime, a pound and a half.

Sprinkle ſome water on the lime,

and when ſlaked and fallen into powder, grind it firſt with the ſulphur, and afterwards with the ſal ammoniac, in ſmall quantities at a time: then diſtil the mixture in a retort, with a fire gradually increaſed. The diſtilled liquor is to be kept, in a bottle cloſe ſtopt, for uſe.

THIS liquor has a ſtrong offenſive ſmell, ſomewhat ſimilar to that which ariſes in the precipitation of *lac ſulphuris*. The vapour in both caſes ſpreads to a conſiderable diſtance, changes ſilver or copper utenſils to a brown or blackiſh colour, and produces diſagreeable alterations in many medicinal preparations. To this circumſtance therefore due regard ought to be had in the performance of that proceſs, and in the keeping of this tincture. If a piece of paper, written upon with a ſaturated ſolution of lead in vegetable acids, and gently dried, be placed in the middle of a quire of paper, or of a pretty thick book, and brought near the unſtopt orifice of the bottle containing this tincture, the vapour will quickly reach it, and change the colourleſs writing to a legible black.

Hoffman has a great opinion of the virtues of this preparation. He ſays, a mixture of one part of the tincture with three parts of ſpirit of wine, in a doſe of thirty or forty drops, proves a moſt powerful diaphoretic; and that a liquor compoſed of this and camphor, takes off the pain of the gout, by bathing the feet with it. This tincture may be a powerful medicine, but it is certainly a very unpleaſant one.

CHAPTER X.

Metallic Preparations.

SECT. I.

Preparations of Gold.

GOLD is the moſt ponderous and perfect of the metals: it abides fixt and unaltered in the ſtrongeſt fire; and is not acted upon by alkaline, or any ſimple acid menſtruum. It diſſolves in aqua regia alone, into a yellow tranſparent fluid: this ſolution ſtains the ſkin, &c. purple: the ethereal ſpirit of wine, and ſome eſſential oils, take up the gold from it: alkalies precipitate the metal in form of a yellowiſh mud, which, exſiccated, and expoſed to a ſmall heat, violently explodes.

As to the medical virtues of this metal, experience has ſufficiently ſhewn, that it is not poſſeſſed of any valuable ones. In its metallic form, however finely comminuted, it proves inactive; when ſatiated with acid, corroſive; and in the intermediate ſtates, either inſignificant or unſafe.

AURUM POTABILE.

Potable gold.

Diſſolve with a moderate heat, half a dram of fine gold, in two ounces of aqua regia; and add to the ſolution one ounce of the eſſential oil of roſemary. Shake them together, and then ſuffer them to reſt: the acid loſes its gold yellow colour; and the oil, which ariſes to the ſurface, becomes richly impregnated therewith. Separate the oil by decantation, and add to it four or five ounces of rectified ſpirit of wine: digeſt this mixture for a month, and it will acquire a purpliſh colour.

THERE have been many preparations of this kind contrived by the deſigning pretenders to alchemy, and impoſed upon the credulous and unwary, as cordials and diaphoretics of ineſtimable value. The above ſeems to be one of the beſt and ſafeſt of them; though it would be equally ſerviceable as a medicine, if made without the ingredient from which it receives its name. The gold is indeed taken up from the acid, and kept for a time diſſolved by the oil; but on ſtanding it totally ſeparates, in form of fine yellow films, like leaf-gold. The effect is the ſame, whether the oil or the vinous ſpirit be mixed with the ſolution of the gold in aqua regia: the only difference is, that the gold is thrown off from the oil to the ſides of the glaſs; while the ſpirit revives it into ſuch ſubtile films, as to float upon the ſurface of the liquor. No means have yet been found of permanently combining gold with either oils or vinous ſpirits.

AURUM FULMINANS.

Fulminating gold.

Pariſ.

Put a dram of filings of gold, with half an ounce of aqua regia newly made, into a matraſs, placed in ſand. When the menſtruum ceaſes to act, pour off the ſolution; and, if any of the gold be left, add as much more aqua regia as ſhall be ſufficient to diſſolve it. Dilute the ſolution with ten times its quantity of warm water; and then drop in oil of tartar per deliquium till the effervescence and precipitation ceaſe. The whole being now ſuffered to ſettle, the clear liquor is to be poured off, and the precipitated matter waſhed with warm water till it becomes inſipid, and afterwards exſiccated.

This powder requires to be exſiccated with the utmoſt precaution; for in a ſmall heat it explodes with great violence. The ſame effect enſues likewiſe upon ſtrongly rubbing it. This property has given name to the preparation; and is the only one on account of which it is at preſent taken any notice of. It has been recommended, indeed, in fevers, as a diaphoretic, in the doſe of a few grains: its more certain effect, however, is to operate downwards, and that not always with ſafety. Konig and Ludovici relate, that in ſome febrile caſes, it has occaſioned almoſt mortal diarrhœas; and Stahl (de *pro-exeucriſi medica*, ſect. viii.) reports, that the inteſtines have been found eroded by it. The more thoroughly it is waſhed and edulcorated, the leſs corroſive it is in the human body, and the leſs violently it fulminates when heated.

SECT. II.

Preparations of Silver.

SILVER is the moſt permanent in the fire of all the metals, after gold: It diſſolves in the pure nitrous acid, into a colourleſs, tranſparent liquor, intenſely bitter and corroſive. This ſolution exſiccated, furniſhes the ſhops with an uſeful cauſtic; which has likewiſe been taken internally in ſmall doſes, and mixed with other ſubſtances, as an hydragogue. It ſtains the ſkin black.

CAUSTICUM LUNARE.
The lunar cauſtic.
Lond.

Let pure ſilver be diſſolved in about twice its weight of aquafortis, upon warm ſand: then gently increaſe the heat, until a dry maſs be left. Melt this in a crucible, that it may be poured into proper moulds, carefully avoiding overmuch heat, leſt the matter ſhould grow too thick.

CAUSTICUM LUNARE, ſeu LAPIS INFERNALIS,
The lunar cauſtic, or infernal ſtone.
Edinb.

Take any quantity of well-cupelled ſilver, flatted into plates and cut in pieces. Diſſolve it by the heat of a ſand-bath, in three times its weight of ſpirit of nitre. Evaporate the ſolution to dryneſs, and put the remaining calx in a large crucible. Let the fire at firſt be gentle, and augment it by degrees, until the maſs flow like oil, and ceaſe to fume: then pour it into iron pipes made for this purpoſe, previouſly heated and greaſed: laſtly, let it be dried, and kept for uſe in a glaſs veſſel cloſe ſtopt.

Strong ſpirit of nitre will diſſolve ſomewhat more than half its weight of pure ſilver; and the weaker of the *aquæ fortes*, formerly deſcribed, proportionably leſs, according to their quantity of pure nitrous acid. Sometimes this ſpirit contains a portion of the vitriolic or marine acids; which, however minute, renders it unfit for diſſolving this metal, and ſhould therefore be carefully ſeparated before the ſolution is attempted. The method which the refiners employ, for examining the purity of their aquafortis, and purifying it if neceſſary, is, to let fall into it a few drops of a perfect ſolution of ſilver already made. If the liquor remain clear, and grow not in the leaſt turbid or whitiſh, it is fit for their uſe; otherwiſe, they add a ſmall quantity more of the ſolution, which immediately turns the whole of a milk-white colour: the mixture being then ſuffered to reſt for ſome time, depoſits a white ſediment; from which it is warily decanted, examined afreſh, and, if need be, further purified, by a freſh addition of the ſolution.

The ſilver, flatted into thin plates, as directed in the ſecond of the above proceſſes, needs not be cut in pieces: the ſolution will go on the more ſpeedily, if they be only turned round into ſpiral circumvolutions, ſo as to be conveniently got into the glaſs, with care that the ſeveral ſurfaces do not touch one another. By this management, a greater extent of the face is expoſed to the action of the menſtruum, than when the plates are cut in pieces and laid above one another. Good aquafortis will diſſolve about half its weight of ſilver, and it is not adviſable to uſe a greater quantity of the menſtruum than is ſufficient for effecting the ſolution; for all the ſurplus muſt be evaporated in the ſubſequent fuſion.

The crucible ought to be large enough to hold five or ſix times the quantity of the dry matter; for it bubbles and ſwells up greatly, ſo as otherwiſe to be apt to run over. During this time, alſo, little drops are now and then ſpirted up, whoſe cauſticity is increaſed by their heat, and againſt which the operator ought therefore to be on his guard. The fire muſt be kept moderate till this ebullition ceaſes, and till the matter becomes conſiſtent in the heat that made it boil before: then quickly increaſe the fire till the matter flows thin at the bottom, like oil; on which it is to be immediately poured into the mould, without waiting till the fumes ceaſe to appear; for when this happens, the preparation proves not only too thick to run freely into the mould, but likewiſe leſs corroſive than it is expected to be.

In want of a proper iron mould, one may be formed of tempered tobacco-pipe clay, not too moiſt, by making in a lump of it, with a ſmooth ſtick firſt greaſed, as many holes as there is occaſion for: pour the liquid matter into theſe cavities, and when congealed, take it out by breaking the mould. Each piece is to be wiped clean from the greaſe; and wrapt up in dry ſoft paper, not only to keep the air from acting upon them, but likewiſe to prevent their corroding or diſcolouring the fingers in handling.

This preparation is a ſtrong cauſtic, and frequently employed as ſuch, for conſuming warts and other fleſhy excreſcences, keeping down fungous fleſh in wounds or ulcers, and ſimilar uſes. It is rarely applied where a deep eſchar is required, as in the laying open of impoſthumations and tumours;

for the quantity neceſſary for theſe purpoſes, liquefying by the moiſture of the ſkin, ſpreads beyond the limits in which it is intended to operate.

PILULÆ LUNARES.
The lunar pills.

Diſſolve pure ſilver in aquafortis, as in the foregoing proceſs, and, after due evaporation, ſet the liquor to cryſtallize. Let the cryſtals be again diſſolved in common water, and mingled with a ſolution of equal their weight of nitre. Evaporate this mixture to dryneſs, and continue the exſiccation with a gentle heat, keeping the matter conſtantly ſtirring, till no more fumes ariſe.

HERE it is neceſſary to continue the fire till the fumes entirely ceaſe, as more of the acid is required to be diſſipated, than in the preceding proceſs. The preparation is, nevertheleſs, in taſte very ſharp, intenſely bitter and nauſeous; applied to ulcers, it acts as a cauſtic, but much milder than the foregoing. Boerhaave, Boyle, and others, greatly commend it in hydropic caſes. The former aſſures us, that two grains of it made into a pill, with crumb of bread and a little ſugar, and taken on an empty ſtomach (ſome warm water, ſweetened with honey, being drunk immediately after), purge gently without griping, and bring away a large quantity of water, almoſt without the patient's perceiving it: that it kills worms, and cures many inveterate ulcerous diſorders. He nevertheleſs cautions againſt uſing it too freely, or in too large a doſe; and obſerves, that it always proves corroſive and weakening, eſpecially to the ſtomach.

SECT. III.

Preparations of Iron.

IRON calcines by fire the moſt eaſily, and melts the moſt difficultly of all the metals. Sulphur promotes its fuſion, and changes it into a ſubſtance not greatly diſſimilar to a combination of the metal with vitriolic acid. All acids diſſolve this metal; even the air corrodes it into a ruſt or calx.

Iron, in its metallic form, or lightly calcined, or combined with vegetable or with mineral acids, acts in the human body in the ſame manner (but with different degrees of power), by conſtringing the fibres. In all theſe ſtates, it promotes, or reſtrains ſecretions, where the deficiency or exceſs proceed from a laxity and debility of the veſſels; and, in general, raiſes the pulſe, and quickens the circulation. The calces ſeem to be the leaſt active preparations; the crude metal, duly comminuted, is more eaſily ſoluble in the animal fluids, and if aceſcent juices be lodged in the primæ viæ, ſoon manifeſts its operation by nidorous eructations, and the black colour of the alvine feces; if previouſly combined with ſaline bodies, it ſcarce ever fails of taking effect.

As the calces of iron are ſcarcely diſſoluble in acids, it has been concluded that they are not ſoluble in the human body, and that therefore they are to be looked upon no otherwiſe than as a mere inactive earth. But admitting the abſolute indiſſolubility of iron while it continues a calx, it muſt be obſerved, that the calces of this metal are remarkably eaſy of revival into their metallic ſtate. Mr. Baumé relates, that calx of iron, digeſted for an hour or two in oil olive, reſumes its perfect metallic nature, ſo as to be attracted by the magnet, and totally ſoluble in acids; whence he infers, that a like revival of the metal happens in the human body. It is matter of common obſervation, that calces of iron tinge the excrements black, a ſure mark of their taking effect: though their effect appears to be neither ſo ſpeedy nor ſo great as that of iron in ſome other forms.

CHALYBIS RUBIGO PRÆPARATA.

Ruſt of ſteel prepared.

Lond.

Expoſe filings of ſteel to the air, frequently moiſtening them with vinegar or water, until they change into ruſt; then grind them in a mortar, and pouring on water, waſh over the more ſubtile powder. The remainder is to be expoſed afreſh to the air, and moiſtened as at firſt, then triturated and waſhed again, and the powders that have been waſhed over, dried, and kept for uſe.

MARTIS LIMATURA PRÆPARATA.

Filings of iron prepared.

Edinb.

Set filings of iron, firſt cleanſed by the magnet, in a moiſt place, that they may turn to ruſt, which is to be ground into an impalpable powder.

They may likewiſe be prepared by moiſtening them with vinegar.

The cleanſing of iron filings by means of a magnet is very tedious, and does not anſwer ſo well as might be expected; for if they be ruſty, they will not be attracted by it, or not ſufficiently: nor will they, by theſe means, be entirely freed from braſs, copper, or other metallic ſubſtances which may adhere to them. It appears from the experiments of Henckel (Pyritolog. cap. *vom eiſem im kieſs*) that if iron be mixed by fuſion with even its own weight of any of the other metals, regulus of antimony alone excepted, the compound will be vigorouſly attracted by the loadſtone.—The ruſt of iron is to be procured at a moderate rate from the dealers in iron, free from any impurities, except ſuch as may be waſhed off by water.

The ruſt of iron is preferable as a medicine to the calces, or croci made by a ſtrong fire. Hoffman relates, that he has frequently given it with remarkable ſucceſs, in obſtinate chlorotic caſes, accompanied with exceſſive headachs, and other violent ſymptoms: and that he uſually joined with it pimpinella, arum root, and ſalt of tartar, with a little cinnamon and ſugar. The doſe is from four or five grains to twenty or thirty: ſome have gone as far as a dram; but all the preparations of this metal anſwer beſt in ſmall doſes, which ſhould rather be often repeated than enlarged.

ÆTHIOPS MARTIALIS.

Martial ethiops.

Put filings of ſteel into an unglazed earthen veſſel, with ſo much water as will ſtand above them about four inches; the whole is to be well ſtirred every day, and more water ſupplied, as that in the veſſel exhales, ſo that the filings may remain always covered: continue this procedure for ſeveral months, till they loſe their metallic aſpect, and are reduced to a fine powder of an inky blackneſs.

This preparation is deſcribed by Lemery in the Memoirs of the French academy. It is ſaid, that if the filings be left unſtirred for ſome days, they unite together ſo firmly, that the maſs is ſcarcely to be beaten into powder by blows of a hammer; if they be left for a little while uncovered with water, the deep black colour does not ſucceed, a part of them changing into ruſt. Mr. Malouin obſerves, that this ethiops is better fitted for general uſe, than any other preparation of iron; that the metal is here in as ſubtile a ſtate as in the croci of iron; and that it is no more decompounded, or changed in its nature, than the crude filings are. He therefore recommends ſubſtituting it to the filings of croci, in doſes of from four grains to eighteen. The tedioufneſs of the proceſs, however, has prevented its coming into uſe; eſpecially as it does not promiſe any advantage, above the common chalybeate preparations, to counterbalance that inconvenience.

CHALYBS CUM SULPHURE PRÆPARATUS.

Steel prepared with ſulphur.

Lond.

Heat the ſteel with a very fierce fire to a ſtrong white heat; and in this ſtate apply it to a roll of ſulphur held over a veſſel of water: the ſteel will melt, and fall down in drops, which are to be picked out from the ſulphur that runs down with them, and ground into an impalpable powder.

It has been ſuppoſed by many, that this preparation is no other than common brimſtone, and that it contains nothing of the ſteel. If the ſteel indeed be not made extremely hot, it will not melt on applying it to the ſulphur, and the latter will run into the water by itſelf: but if the metal be heated to the degree above directed, it will readily melt and fall down in drops of a brown colour; whilſt the ſulphur runs into long yellow ſtrings.

The heat requiſite for this purpoſe, is not eaſily procurable in the common furnaces of the apothecary; and even if the ſteel be ſufficiently heated at firſt, it will ſoon become too cool to be corroded by the ſulphur. For this reaſon, and on account of the offenſive fumes which ariſe very copiouſly, and which are not avoidable by the operator, this proceſs has been long neglected. The ſhops have been generally ſupplied with a preparation of ſteel with ſulphur, made at an eaſier rate, in the following manner.

MARS SULPHURATUS.

Sulphurated iron.

Edinb.

Mix filings of iron with twice their weight of powdered ſulphur, and as much water as is ſufficient to make them into a paſte; which, on ſtanding at reſt for ſix hours, will ſwell up. The matter is then to be pulverized, put by degrees into a hot crucible to deflagrate, and kept continually ſtirring with an iron ſpatula till it falls into a deep black powder.

If the quantity of this mixture be conſiderable, and ſtrongly preſſed down, it will not only ſwell on ſtanding for ſome hours, but will heave up very weighty obſtacles, and burſt out into flame.

CROCUS MARTIS APERIENS.

Opening crocus of iron.

This is made by keeping the foregoing preparation longer over the fire, till it aſſumes a red colour.

CROCUS MARTIS ASTRINGENS.

Aſtringent crocus of iron.

Edinb.

This is made from the opening crocus of iron, by reverberating it for a long time in the moſt extreme degree of heat.

These preparations differ from one another in virtue; though the difference is not of ſuch a kind as the titles, they have been uſually diſtinguiſhed by, import. All the preparations of ſteel act by an aſtringent quality; that above, denominated *aſtringent*, ſeems to have the leaſt effect. They may be given in form of bolus, electary, or pill, from ſix grains to a ſcruple.

In ſome foreign pharmacopœias, the croci of iron are prepared from pure green vitriol. This ſtrongly calcined (or the colcothar remaining after the diſtillation of oil of vitriol) is the aſtringent crocus; when leſs calcined, it is called aperient. Theſe preparations differ little, if at all, from thoſe above diſtinguiſhed by the ſame appellations; and, accordingly, the Edinburgh college has now allowed the ſubſtitution of colcothar of vitriol to both the croci.

MARS SOLUBILIS, ſeu CHALYBS TARTARIZATUS.

Soluble, or tartarized ſteel.

Edinb.

Mix equal parts of iron filings, and cryſtals of tartar, with as much water as is ſufficient to reduce them into a maſs: this maſs is to be dried in a ſand heat; then powdered, moiſtened, and dried again: and this proceſs repeated, till ſuch time as the matter will eaſily grind into an impalpable powder.

This is a very elegant and uſeful preparation of ſteel, and will in many caſes take effect after all the foregoing ones have failed; the ſalt here joined rendering the metal ſufficiently ſoluble in the animal fluids. It may be given either in a liquid form, or in that of a bolus, &c. in doſes of four or five grains, or half a ſcruple. Dr. Willis is ſaid to have been the inventor of this preparation, and by his name it has been uſually diſtinguiſhed in the ſhops. The chemiſts have received another method of preparing iron with tartar; which is as follows.

MARS SOLUBILIS ALCALIZATUS

Alkalized ſoluble ſteel.

Take equal quantities of filings of iron, and of white tartar. Grind them together, and put them into a crucible, which is to be ſet in a fire ſtrong enough to make the materials red hot; in this ſtate, let them continue for ſome time. When grown cold, powder the matter in a mortar; and the part which will not paſs through a fine ſieve, heat and pulverize again; repeating this, until the whole be paſſed through. Mix the ſeveral ſiftings together, and keep them in a veſſel cloſe ſtopt from the air.

This preparation is ſoluble like the foregoing. Expoſed to the air, it deliquiates like alkaline ſalts (the tartar being converted into an alkali by the fire) and therefore it is not to be preſcribed in any dry form. It is very rarely uſed.

FLORES MARTIALES.

Martial flowers.

Lond.

Take of

Colcothar of green vitriol waſhed, or filings of iron, one pound ;

Sal ammoniac, two pounds.

Mix and ſublime in a retort. Grind the flowers with the matter which remains in the bottom of the retort, and repeat the ſublimation until the flowers ariſe of a beautiful yellowiſh colour.

To the reſiduum you may add half a pound of freſh ſal ammoniac, and ſublime as before ; repeating this as long as the flowers ariſe well coloured.

The ſucceſs of this proceſs depends principally upon the fire's being haſtily raiſed ; that the ſal ammoniac may not ſublime before the heat is become ſtrong enough to enable it to carry up a ſufficient quantity of the iron. Hence glaſs veſſels are not ſo proper as earthen or iron ones ; for when the former are made uſe of, the fire cannot be raiſed quick enough, without endangering the breaking of them. The moſt convenient veſſel is an iron pot : to which may be luted an inverted earthen jar, having a ſmall hole in its bottom, to ſuffer the elaſtic vapours, which ariſe during the operation, to eſcape. It is of advantage to thoroughly mix the ingredients together, moiſten them with a little water, and then gently dry them ; and to repeat the pulverization, humectation, and exſiccation, two or three times, or oftener. If this method be followed, the ſal ammoniac may be increaſed to three times the quantity of the iron, or further ; and a ſingle ſublimation will often be ſufficient to raiſe flowers of a very deep orange colour.

This preparation is ſuppoſed to be highly aperient and attenuating; though no otherwiſe ſo than the reſt of the chalybeates, or at moſt, only by virtue of the ſaline matter joined to the iron. It has been found of good ſervice in hyſterical and hypochondriacal caſes, and in diſtempers proceeding from a laxity and weakneſs of the ſolids, as the rickets. It may be conveniently taken in the form of a bolus, from two or three grains to ten. It is nauſeous in a liquid form (unleſs in ſpirituous tincture) and occaſions pills to ſwell and crumble, except ſuch as are made of the gums.

LIXIVIUM MARTIS.

Ley of iron.

Lond.

Let the matter, which remains after the ſublimation of the martial flowers, be ſet by in a moiſt place. It will run into a liquor, which is to be kept for uſe.

This liquor ſeems greatly to reſemble a ſaturated ſolution of iron made in ſpirit of ſalt. Its taſte is highly aſtringent, and ſomewhat ſweetiſh. It may be given in doſes of a drop or two in any convenient vehicle, for the ſame intentions as the other chalybeates. It is called by ſome of the chemical writers, *oleum martis per deliquium*, and *eſſentia martis*.

SAL MARTIS.

Salt of ſteel.

Lond.

Take of

Strong ſpirit or oil of vitriol, eight ounces ;

Iron filings, four ounces ;

Water, two pints.

Mix them together ; and, after the ebullition ceaſes, let the mixture ſtand for ſome time upon warm ſand ; then pour off and filter the liquor; and, after proper exhalation, ſet it by to cryſtallize.

VITRIOLUM MARTIS, ſeu SAL CHALYBIS.

Vitriol of iron, or ſalt of ſteel. *Edinb.*

Take of

Oil of vitriol diluted with an equal quantity of warm water, four ounces;

Filings of iron, three ounces.

Cautiouſly mix them together, and digeſt in a cucurbit for twelve hours, that the metal may be diſſolved. Filter the ſolution whilſt hot, then evaporate it till a pellicle appears on the ſurface, and ſet it in a cold place, until the vitriol has cryſtallized at the bottom of the veſſel. The liquor poured off from the cryſtals is to be again evaporated till a pellicle forms on the top, and ſet to ſhoot as before. Collect all the cryſtals together, and dry them on a paper in the ſhade.

During the diſſolution of the iron, a ſtrong ſulphureous vapour ariſes, which on the approach of flame, catches fire, and explodes, ſo as ſometimes to burſt the veſſel. To this particular, therefore, the operator ought to have due regard.

The chemiſts are ſeldom at the trouble of preparing this ſalt according to the directions juſt given: but in its ſtead ſubſtitute common green vitriol, purified by ſolution in water, filtration, and cryſtallization. The only difference betwixt the two is, that the common vitriol contains ſomewhat more metal in proportion to the acid; and hence in keeping, its green colour is much ſooner debaſed by a ruſty browniſh caſt. The ſuperfluous quantity of metal may be eaſily ſeparated, by ſuffering the ſolution of the vitriol to ſtand for ſome time in a cold place, when a browniſh yellow ochery ſediment will fall to the bottom; or it may be perfectly diſſolved, and kept ſuſpended, by a ſuitable addition of oil of vitriol. If the vitriol be ſuſpected to contain any cupreous matter (which it does not appear that the common Engliſh vitriol ever does, though almoſt all the foreign vitriols do), the addition of ſome bright iron wire to the ſolution will both diſcover, and effectually ſeparate that metal: for the acid quits the copper to diſſolve a proportionable quantity of the iron; and the copper, in its ſeparation from the acid, adheres to the undiſſolved iron, and forms a ſkin of a true copper colour upon its ſurface. Even a vitriol of pure copper may, on this principle, be converted into a pure vitriol of iron.

But though the vitriolic acid appears, in this operation, to have ſo much ſtronger a diſpoſition to unite with iron than with copper, that it totally rejects the latter upon preſenting the former for it to act upon; the operator may, nevertheleſs, give a dangerous impregnation of copper to the pureſt and moſt ſaturated ſolution of iron in the vitriolic acid, by the uſe of copper veſſels. If the martial ſolution be boiled in a copper veſſel, it never fails to diſſolve a part of the copper, diſtinguiſhable by its giving a cupreous ſtain to a piece of bright iron immerſed in it. By the addition of the iron, the copper is ſeparated; by boiling it again without iron, more of the copper is diſſolved. And this may in like manner be ſeparated by adding more iron.

The ſalt of ſteel is one of the moſt efficacious preparations of this metal; and not unfrequently made uſe of, in cachectic and chlorotic caſes, for exciting the uterine purgations, ſtrengthening the tone of the viſcera, and deſtroying worms. It may be conveniently taken in a liquid form, largely diluted with aqueous fluids. Boerhaave directs it to be diſſolved in an hundred times its quantity of water, and the ſolution to be taken in the doſe of twelve ounces, on an empty ſtomach, walking gently after it. Thus managed, he ſays, it opens the body, purges, proves diuretic, kills and expels worms, tinges the excrements black, or forms them into a matter like clay, ſtrengthens the fibres, and thus cures many different diſtempers. The quantity of vitriol in the above doſe of the ſolution is fifty-ſeven grains and a half: but in common practice, ſuch large doſes of this chalybeate are never ventured on. Four or five grains, and in many caſes half a grain, are ſufficient, for the intentions in which chalybeate medicines are given. Very dilute ſolutions, as that of a grain of the ſalt in a pint of water, may be uſed as ſuccedanea to the natural chalybeate waters, and will in many caſes produce ſimilar effects.

SECT. IV.

Preparations of Copper.

Copper is leſs eaſy of ſolution than iron; and, in its metallic ſtate, does not appear to be acted on by the animal fluids, or to have any conſiderable effect in the body. Diſſolved, it proves externally an eſcharotic; internally, a violent purgative and emetic. Acids of every kind diſſolve it, and likewiſe volatile alkalies. With the vegetable and marine acids, it forms a green ſolution; with the vitriolic acid, and volatile alkalies, a blue.

ÆS USTUM.

Let thin copper plates be ſtratified in a crucible with ſulphur; and calcined with a ſtrong fire until they become pulverable.

Preparations of this kind, made with ſulphur, nitre, and common ſalt, or mixtures of theſe, or by calcining the copper without addition, have been ſometimes uſed in external applications, for drying and cleanſing ulcers, and preventing the growth of fungous fleſh; and ſometimes likewiſe internally. They are ſtill retained in ſome foreign pharmacopœias, but have not for a long time been taken notice of among us, for any medicinal intention.

CRYSTALLI VENERIS.
Cryſtals of copper.

Diſſolve pure copper in thrice its weight of aquafortis, adding the metal to the acid by little and little at a time. Evaporate the liquor by a gentle heat, till one half of it be waſted; then ſet the remainder in a cool place to cryſtallize: afterwards dry the cryſtals, and keep them in a vial cloſe-ſtopt from the air.

These cryſtals are ſtrongly cauſtic, ſimilar to the *cauſticum lunare*; but are ſo much diſpoſed to liquefy, that they are ſcarce ever made uſe of, and cannot eaſily be preſerved.

TINCTURA VENERIS VOLATILIS.
Volatile tincture of copper.

Take of
Copper filings, one dram;

Spirit of ſal ammoniac, twelve drams.

Let them ſtand together in a cloſe veſſel, frequently ſhaking it, until the liquor is tinged of a beautiful violet colour.

This tincture, or ſolution, of copper has been given internally, in the doſe of a few drops, as a diuretic. Boerhaave directs at firſt three drops to be taken in a morning faſting, with a glaſs of mead, and this doſe to be daily doubled till it comes to twenty-four drops; which laſt quantity is to be continued for ſome days. He ſays, that by theſe means, he cured an hydropic perſon labouring under a confirmed aſcites; and that the medicine procured ſurpriſing diſcharges of urine; that nevertheleſs, on trying it in another caſe of the ſame kind, it did not anſwer. See the article Cuprum.

ENS VENERIS.

Edinb.

Take of

Colcothar of green vitriol well edulcorated with water, and afterwards dried,

Sal ammoniac, of each equal parts.

Reduce them ſeparately into powder; then mix, and put them into an earthen cucurbit, ſo as to fill two-thirds of it. Place the cucurbit in an open fire, and, having adapted to it a glaſs blind-head, apply at firſt a gentle heat, which is to be increaſed by degrees, and continued as long as the flowers ariſe of a yellow colour inclining to red. When the veſſels are grown cold, let the flowers be carefully ſwept out with a feather.

If the blue vitriol be perfectly good, this proceſs will not ſucceed in the manner here ſet down. Where it does ſucceed, that is, where the flowers prove of a reddiſh yellow colour *(ex luteo rubentes)* it is to be preſumed, that the ſucceſs is owing to the vitriol's partaking largely of iron, and that the preparation is not greatly different from the *flores martiales* of the preceding ſection. The colour of blue vitriol is undoubtedly owing to copper: but moſt of the common vitriols of this kind contain, alſo, no inconſiderable quantity of iron; and a reddiſh yellow colour of the flowers may be looked upon as a mark, that it is chiefly or ſolely the iron that the ſal ammoniac has carried up. For this is the colour which iron always gives in its ſublimates with ſal ammoniac; whereas copper, in all its ſolutions, or ſoluble combinations with ſal ammoniac, or other ſaline bodies, gives a blue or green, or a colour compounded of theſe two.

The proceſs is originally taken from Mr. Boyle, who tells us, that he and a chemiſt, endeavouring to imitate Butler's ſtone by a preparation of calcined vitriol, and finding the medicine upon trial, though far ſhort of what Helmont aſcribes to his, yet no ordinary one, they called it, for the mineral's ſake it was made of, *ens primum veneris.*

The compoſition of vitriols was at that time but imperfectly known: and this is not the only inſtance of an effect's being aſcribed to the cupreous part of a vitriol, which was owing to the ferrugineous. Though Boyle looked on the preparation as proceeding from copper, and accordingly directs a good venereal vitriol to be uſed; yet, in the Goſlarian and Dantzick vitriol, which he recommends as being very fit for the purpoſe, iron is the prevailing metal, the quantity of copper being very inconſiderable; and it appears from his own words, that ſometimes, at leaſt, he uſed the Engliſh vitriol, which is ſcarcely ever found to contain any metallic matter beſides iron. The yellow or reddiſh colour which he aſcribes to his ſublimate, and its property of turning to an inky blackneſs with infuſion of galls, are marks of its having been truly a chalybeate preparation.

In a preceding edition of the London pharmacopœia, agreeably to Boyle's opinion of the production of the ſublimate, the proceſs was inſerted with blue vitriol; and the pharmacopœias of Edinburgh and Paris followed the example. The London college, at the laſt reviſal of their book, have corrected this error, and ordered green vitriol, or filings of iron itſelf, to be uſed; but the miſtake is ſtill continued in the other pharmacopœias.

From good blue vitriol, or pure vitriol of copper, the ſublimate here required cannot be obtained: and, although it may be prepared from the common blue vitriol of the ſhops, as I have on trial found that it may; yet it is ſurely imprudent to endanger impregnating the preparation with that noxious metal; more eſpecially as pure vitriols of iron are procurable at a much cheaper rate than the others. Thoſe mixed vitriols in which the copper greatly prevails, give firſt a green or blue cupreous ſublimate, and afterwards a yellow or reddiſh ferrugineous one; and thoſe in which iron abounds moſt, give firſt the ferrugineous, and afterwards the cupreous flowers; though poſſibly neither ſublimate is entirely free from an admixture of the other.

SECT. V.

Preparations of Lead.

LEAD readily melts in the fire, and calcines into a duſky powder: which, if the flame be reverberated on it, becomes at firſt yellow, then red, and at length melts into a vitreous maſs. This metal diſſolves eaſily in the nitrous acid, difficultly in the vitriolic, and in ſmall quantity in the vegetable acids; it is alſo ſoluble in expreſſed oil, eſpecially when calcined.

Lead, and its calces, whilſt undiſſolved, have no conſiderable effects as medicine. Diſſolved in oils, they are ſuppoſed to be (when externally applied) anti-inflammatory and deſiccative. Combined with vegetable acids, they are notably ſo; and taken internally prove a powerful but dangerous ſtyptic.

PLUMBUM USTUM.

Burnt lead.

Edinb.

Melt lead with a gentle fire, and keep it continually ſtirring, with an iron ſpatula, till it change into powder.

MINIUM.

Red lead.

Edinb.

Let any quantity of lead be melted in an unglazed earthen veſſel, and kept ſtirring with an iron ſpatula, till it fall into a powder, at firſt blackiſh, afterwards yellow, and at length of a deep red colour, in which laſt ſtate it is called minium; taking care not to raiſe the fire ſo high as to run the calx into a vitreous maſs.

The preparation of red lead is ſo troubleſome and tedious, as ſcarce ever to be attempted by the apothecary or chemiſt; nor indeed is this commodity expected to be made by them, the preparation of it being a diſtinct branch of buſineſs. The makers melt large quantities of lead at once, upon the bottom of a reverberatory furnace built for this purpoſe, and ſo contrived, that the flame acts upon a large ſurface of the metal, which is continually changed by the means of iron rakes drawn backwards and forwards, till the fluidity of the lead be deſtroyed; after which, the calx is only now and then turned. By barely ſtirring the calx, as before directed, in a veſſel over the fire, it acquires no redneſs; the reverberation of flame upon the ſurface being abſolutely neceſſary for this effect. It is ſaid, that twenty pounds of lead gain, in this proceſs, five pounds; and that the calx, being reduced into lead again, is found one pound leſs than the original weight of the metal.

Theſe calces are employed in external applications, for abating inflammations, cleanſing and healing ulcers, and the like. Their effects, however, are not very conſiderable; nor are they perhaps of much further real uſe, than as they give conſiſtence to the plaſter, unguent, &c.

CERUSSA.

Ceruſe, or white lead.

Edinb.

Put ſome vinegar into the bottom of an earthen veſſel, and ſuſpend over the vinegar very thin plates of lead, in ſuch a manner that the vapour which ariſes from the acid, may circulate about the plates. Set the containing veſſel in the heat of horſe-dung, for three weeks. If, at the end of this time, the plates be not totally calcined, ſcrape off the white powder, and expoſe them again to the ſteam of vinegar, till all the lead be thus corroded into powder.

The making of white lead alſo is become a trade by itſelf, and confined to a few perſons, who have large conveniencies for this purpoſe. The general method which they follow, is nearly the ſame with that before deſcribed. See the Philoſophical Tranſactions, N° 137.

In this preparation, the lead is ſo far opened by the acid, as to diſcover, when taken internally, the malignant quality of the metal; and to prove externally, when ſprinkled on running ſores, or ulcers, moderately cooling, drying, and aſtrictive.

SACCHARUM SATURNI.

Sugar of lead.

Lond.

Boil ceruſe with diſtilled vinegar, in a leaden veſſel, until the vinegar become ſufficiently ſweet: then filter the vinegar through paper, and, after due evaporation, ſet it to cryſtallize.

Edinb.

Put any quantity of ceruſe into a cucurbit, and pour thereon diſtilled vinegar to the height of four inche . Digeſt them together for ſome days in a ſand-heat, till the vinegar has acquired a ſweetiſh taſte, when it is to be ſuffered to ſettle, and then poured off. Add freſh vinegar to the remainder, and repeat this proceſs till the menſtruum no longer extracts any ſweet taſte. Let all the impregnated liquors reſt for ſome time: and, after they have been poured from the feces, evaporate them, in a glaſs veſſel, to the conſiſtence of thin honey; ſo that, upon being ſet in a cool place, the ſugar may ſhoot into cryſtals, which are afterwards to be dried in the ſhade. Exhale the remaining liquor to a pellicle, ſet it again in the cold, and more cryſtals will ſhoot. Repeat this operation till no cryſtals can be any longer obtained.

Ceruse (eſpecially that ſort called *flake lead*, which is not, like the others, ſubject to adulteration) is much preferable either to minium or litharge, for making the ſugar of lead: becauſe the corroſion, which it has already undergone from the ſteam of vinegar, diſpoſes it to diſſolve more readily. It ſhould be finely powdered before the vinegar is put to it, and during the digeſtion, or boiling, every now and then ſtirred up with a wooden ſpatula, to promote its diſſolution, and prevent its concreting into a hard maſs at the bottom. The ſtrong acid obtained from the caput mortuum of vinegar may be employed for this proceſs to better advantage than the weaker, though purer acid, before directed. If a ſmall quantity of rectified ſpirit of wine be prudently added to the ſolution as ſoon as it is duly exhaled, and the mixture ſuffered to grow cold by ſlow degrees, the ſugar will concrete into very large and tranſparent cryſtals, which are ſcarcely to be obtained by any other method.

The ſugar of lead is much more efficacious than the foregoing preparations, in the ſeveral intentions to which they are applied. Some have ventured upon it internally, in doſes of a few grains, as a ſtyptic, in hæmorrhages, profuſe colliquative ſweats, ſeminal fluxes, the fluor albus, &c. nor has it failed their expectations. It very powerfully reſtrains the diſcharge; but almoſt as certainly as it does this, it occaſions ſymptoms of another kind, often more dangerous than thoſe removed by it, and ſometimes fatal. Violent pains in the bowels, or through the whole body, and obſtinate conſtipations, ſometimes immediately follow, eſpecially if the doſe has been conſiderable. Cramps, tremors, and weakneſs of the nerves, generally, ſooner or later, enſue.

Boerhaave is of opinion, that this preparation proves malignant only ſo far as its acid happens to be *abſorbed* in the body; for in ſuch caſe, he ſays, " it returns again into ceruſe, which is violently poiſonous." On this principle it would follow, that in habits where acidities abound, the ſugar of lead would be innocent. But this is far from being the caſe. Lead and its preparations act in the body only ſo far as they are *combined* with acid. Ceruſe poſſeſſes the qualities of the ſaccharum only in a low degree; and either of them, freed from the acid, has little, if any effect at all.

SECT. VI.

Preparations of Tin.

TIN eaſily melts in the fire, and calcines into a duſky powder, which by a further continuance of the heat, becomes white. A maſs of tin, heated till it is juſt ready to melt, proves extremely brittle, ſo as to fall in pieces from a blow, and, by dextrous agitation, into powder. Its proper menſtruum is aqua regia; though the other mineral acids alſo may be made to diſſolve it entirely, and the vegetable ones in ſmall quantity. It cryſtallizes with the vegetable and vitriolic acids; but with the others, deliquiates.

The virtues of this metal are little known. It has been recommended as an antihyſteric, antihectic, &c. At preſent it is chiefly uſed as an anthelmintic.

STANNUM PULVERATUM.

Powdered tin.

Lond.

Melt the tin, and pour it into a wooden box rubbed in the inſide with chalk. Then immediately let the box be nimbly ſhaken, and a part of the tin will fall into powder. The remainder is to be melted a ſecond time, and treated in the ſame manner, till the whole of the metal be thus reduced into powder.

THIS preparation has been uſed for ſome time as a remedy againſt worms, particularly the flat kinds, which too often elude the force of other medicines. The general doſe is from a ſcruple to a dram; ſome confine it to a few grains. But Dr. Alſton aſſures us, in the Edinburgh eſſays, that its ſucceſs chiefly depends upon its being given in much larger quantities. He gives an ounce of the powder on an empty ſtomach, mixed with four ounces of melaſſes; next day, half an ounce; and the day following, half an ounce more: after which a cathartic is adminiſtered. He ſays the worms are uſually voided during the operation of the purge, but that pains in the ſtomach occaſioned by them are removed almoſt immediately upon taking the firſt doſe of the tin. The experiments on tin, related before in this work, account ſufficiently for its being deſtructive to theſe animals; though not for its being ſafe to the patient.

CALX JOVIS.

Calx of tin.

Edinb.

Melt any quantity of tin in an unglazed earthen veſſel, and keep it continually ſtirring with an iron ſpatula, until it falls into a calx.

THIS proceſs is not here intended to be carried ſo far as the pharmaceutical writers in general direct. It muſt be diſcontinued as ſoon as the metal is reduced into a duſky powder: if calcined to whiteneſs, the following operation would not well ſucceed. As to the virtues of the calx, they do not ſeem to be greatly different from thoſe of the foregoing preparation.

SAL JOVIS.

Salt of tin.

Edinb.

Take one pound of the foregoing calx of tin; and four ounces of aqua regia, diluted with ſix times its quantity of ſpring water. Digeſt them together in a ſand-heat for two days: then ſhake the veſſel; and, after the more ponderous parts of the calx have ſubſided, pour off the turbid liquor, and evaporate it almoſt to dryneſs; the further exſiccation of the matter is to be performed on bibulous paper. On the calx which is left, pour half as much of the diſſolvent as was employed at firſt; and proceed in the ſame manner as before.

In former editions, the menſtruum, after digeſtion upon the calx of tin, was ordered to be filtered, then evaporated till a pellicle appeared upon the ſurface, and ſet by to cryſtallize. But the cryſtallization ſucceeded very ill; and ſuch cryſtalline matter, as was with difficulty obtained, proved to be little other than a nitrous ammoniacal ſalt afforded by the aqua regia; for this menſtruum does not diſſolve, or diſſolves only an inconſiderable quantity of, the calx of tin. The proceſs is now rendered more practicable, by allowing the finer parts of the calx to be mixed with the liquor in an undiſſolved ſtate, and the whole to be inſpiſſated and exſiccated together. It is probable, however, that the preparation here intended might be obtained in a manner ſtill more commodious.

I cannot apprehend what advantage there is in calcining the tin. Tin, in its metallic ſtate, diſſolves freely in aqua regia, but calcinations render it almoſt indiſſoluble in that menſtruum; the further it is calcined, the more does it loſe of its ſolubility. If tin and its calx were of equal ſolubility, it could ſcarcely be ſuſpected that the ſolutions of the two would be different in quality; for the phlogiſton, or inflammable principle, which fire expels from metals in their calcination, is equally extricated by acids in their diſſolution. A ſalt of tin with aqua regia may therefore be more advantageouſly prepared in the following manner:

Let melted tin be poured in ſmall ſtreams into a veſſel of cold water, that it may be reduced into grains. Drop theſe by little and little, as a grain at a time, into aqua regia, that the diſſolution may go on ſlowly, without effervеſcence or the diſcharge of fumes. When the metal is no longer acted on, pour off the ſolution, and evaporate it in a ſand-heat, till a dry ſalt is left.

This preparation ſeems intended chiefly for external uſe, as a mild eſcharotic and detergent. It is not ſo corroſive as might be expected, nor much diſpoſed to liquefy in the air, though it is not eaſily made to aſſume a cryſtalline form. A perfect cryſtalline ſalt may be obtained from tin by the vitriolic acid, in the following manner:

Take two ounces of tin, reduced into grains or filings; and five ounces of oil of vitriol. Put them into a wide-necked glaſs, in a ſand-heat, and increaſe the fire till the liquid boils and evaporates, and the matter remains almoſt dry. Then remove the veſſel from the fire, and, when the ſaline reſiduum has concreted, ed, add a proper quantity of water, which, by the aſſiſtance of a moderate heat, will diſſolve nearly the whole. Filter the ſolution, and, after due evaporation, ſet it to cryſtallize.

Salt of tin for internal uſe, has been commonly directed to be prepared with diſtilled vinegar; by digeſting the vinegar on calcined tin, and then evaporating and cryſtallizing. Several of the chemiſts have denied that any cryſtals would by theſe means be obtained, or that the diſtilled vinegar would diſſolve any part of the calx: and indeed when the tin is but moderately calcined, as above directed, it does not appear that any ſolution happens.

There are two ſtates in which tin is conſiderably acted upon by vegetable acids: its perfect metallic ſtate, and that of a perfect calx. Plates of pure tin, put into common vinegar, are in a few hours corroded: by degrees the liquor becomes quite opake and turbid, and depoſits great part of the corroded tin to the bottom in form of a whitiſh powder; but ſtill retains a part exquiſitely divided; for, after ſtanding many days, and after paſſing through a filter, ſo much remained ſuſpended, as to give a whitiſhneſs and opacity to the fluid. Acid juices of fruits, ſubſtituted for vinegar, exhibited the ſame phænomena. Theſe experiments, though they do not ſhew that the tin is thus ſufficiently diſſolved to afford a perfect cryſtalline ſalt, prove, nevertheleſs, what is of more importance to be known, that tin or tinned veſſels, however pure the tin be, will give a metalline impregnation to light vegetable acids ſuffered to ſtand in them for a few hours.

In order to the obtaining of a perfect ſolution of tin for cryſtallization, the metal muſt be highly calcined; for, though its ſolution in mineral acids be prevented by calcination, it is otherwiſe in regard to the vegetable. Some take the common calx of tin, and having ſpread it thinly over the bottom of a proper veſſel, continue the calcination in a gentle heat, frequently ſtirring the powder, for three or four days, in a furnace where the air may paſs freely over the ſurface. Others mix the common calx or filings of tin with twice their weight of nitre, and inject the mixture by degrees into a veſſel ſtrongly heated, over which are fitted a number of aludels, or earthen pots with holes in their bottoms. The lowermoſt of theſe veſſels has a hole alſo in the ſide, through which the matter is thrown in: during the deflagration which happens on each injection, a part of the tin is volatilized, and adheres to the pots in form of a fine white powder, which is ſwept out and waſhed with water. Others obtain a calx of tin, perhaps not leſs perfect, more expeditiouſly and with leſs trouble: by diſſolving the metal in aqua regia (which, as already obſerved, has, in this reſpect, nearly the ſame effect as fire) and by afterwards recovering the calx, by diluting the ſolution with about four times its quantity of water, and gradually adding to it ſpirit of ſal ammoniac till the efferveſcence ceaſes; a white curdly matter precipitates, which is to be waſhed with water and dried.

Take of calx of tin, prepared in either of the above methods, one pound; of diſtilled vinegar, one gallon. Digeſt them together, occaſionally ſtirring up the matter from the bottom, till the vinegar has acquired a rough ſweetiſh taſte. then evaporate the liquor to the conſiſtence of a ſyrup, add to it about one-twentieth its weight of rectified ſpirit of wine, and ſuffer the heat ſlowly to decreaſe, that the ſalt may cryſtallize.

The cryſtals obtained by this method are hard, ſolid, colourleſs, tranſparent, void of acrimony. They have been recommended, in the doſe of a few grains, in uterine diſorders: but it does not appear that experience has warranted the virtues attributed to them; nor are any of theſe ſalts at preſent made uſe of in common practice, or kept in the ſhops.

The powder precipitated from aqua regis, either by volatile alkalies, or by water alone, is ſometimes employed as a coſmetic, under the name of Magistery of tin. A whiter, and more elegant preparation of this kind might be obtained, by diſſolving the metal in the vitriolic acid, and precipitating with volatile ſpirits.

AURUM MUSIVUM.

Moſaic gold.

Lond.

Take of

Tin, one pound;
Flowers of ſulphur, ſeven ounces;
Sal ammoniac,
Purified quickſilver, of each half a pound.

Melt the tin by itſelf, add to it the quickſilver, and, when the mixture is grown cold, reduce it into powder. Mix this with the ſulphur and ſal ammoniac, and ſublime in a matraſs. The moſaic gold will be found under the ſublimed matter, with ſome droſs at the bottom.

The management of this proceſs, ſo as to give to the preparation the beautiful colour and appearance for which it is admired, has been held as a ſecret. The chemiſts ſeem greatly divided as to the proportions which the ingredients ought to bear to each other, and in this ſome make the chief difficulty to conſiſt; while others make the due regulation of the fire to be the principal point. There does not however appear to be any very great nicety in either reſpect. I have found the proceſs to ſucceed equally with very different proportions of the materials; by mixing them thoroughly together; putting them into a wide-necked matraſs upon a little ſand in an iron pot; applying a gentle fire for ſome time, till the white fumes, which aroſe copiouſly at firſt, and paſſed out at the neck of the glaſs, began to abate; then gradually increaſing the fire till the ſand became red-hot, and keeping it up in this ſtate for a conſiderable while, according to the quantity of the mixture.

The moſaic gold is chiefly valued, and receives its name from its ſparkling gold-like hue. As a medicine, it is at preſent little regarded: though formerly held in conſiderable eſteem, in hyſterical and hypochondriacal complaints, malignant fevers, and venereal diſorders. In theſe laſt it has been recommended, from a ſuppoſition of its being a mercurial; but, on conſidering the circumſtances of the proceſs, and the phænomena that occur in it, there will appear little probability of any of the mercury's being retained in the preparation.

The matraſs being broken when the proceſs is finiſhed, the moſaic gold is found in the bottom; and the ſublimed ſubſtance, above it, conſiſts partly of ſal ammoniac, partly of ſulphur, and partly of a cinnabar reſulting from the combination of part of the ſulphur and mercury. The aurum moſaicum is found to weigh more than the tin employed; but pure tin, in being calcined by itſelf, gains very nearly as much as it does in this proceſs: the golden colour is probably owing to a minute portion of ſulphur adhering to the tin. On roaſting the aurum over a gentle fire, it ſmokes a little, and ſoon changes its golden hue to a dirty-coloured one, not unlike that of tin lightly calcined. Being then mixed with a proper flux, and melted in a crucible, it yields a lump of tin, not far ſhort of the original weight of the metal.

The college of Edinburgh, tho' they formerly divided this preparation into two proceſſes, one for amalgamating the tin with the mercury, the other for the ſublimation with the ſulphur and ſal ammoniac, have now entirely rejected it.

SECT. VII.

Preparations of Mercury.

MERCURY, or quickſilver, is a ponderous metallic fluid, totally volatile in a ſtrong fire, and calcinable by a weaker one (though very difficultly) into a red powdery ſubſtance. It diſſolves in the nitrous acid, is corroded by the vitriolic, but not acted on by the marine in its liquid ſtate. It nevertheleſs may be combined with this laſt, if ſkilfully applied in the form of fume. Quickſilver unites, by trituration, with earthy, unctuous, reſinous, and ſimilar ſubſtances, ſo as to loſe its fluidity: triturated with ſulphur, it forms a black maſs, which by ſublimation changes into a beautiful red one.

The general virtues of the mercurial preparations are, to fuſe the juices, however viſcid, in the minuteſt and remoteſt veſſels; by theſe means they prove eminently ſerviceable in inveterate chronical diſorders, proceeding from a thickneſs and ſluggiſhneſs of the humours, and obſtinate obſtructions of the glands. Crude mercury has no effect this way. Reſolved into fume, or divided into minute particles, and prevented from re-uniting by the interpoſition of other ſubſtances, it operates very powerfully; unleſs the dividing body be ſulphur, which reſtrains its action. Combined with a ſmall quantity of the mineral acids, it acts effectually, though in general mildly: with a larger, it proves violently corroſive.

ARGENTI VIVI PURIFICATIO.

Purification of quickſilver.

L. E.

Diſtil quickſilver in a retort; and afterwards waſh it with water and common ſalt, or with vinegar.

If a glaſs retort be made uſe of for this operation, it ought to have a low body, and a long neck; and the neck ſhould be conſiderably inclined downwards, ſo as to allow the elevated mercury a quick deſcent. The receiver ſhould be filled almoſt to the neck of the retort with water; the uſe of this is not to condenſe, but to cool, the diſtilling quickſilver, leſt falling hot upon the bottom, it ſhould crack the glaſs. The diſtillation may be more conveniently performed in an iron retort, or an iron pot fitted with a head.

The fire ſhould be raiſed no higher than is ſufficient to elevate the mercury; for certain mineral ſubſtances, which are ſaid to be ſometimes mixed with it, prove in part volatile in a degree of heat not much greater than that in which mercury diſtils. Mr. Boyle relates, that he has known quickſilver carry up with it a portion even of lead, ſo as to have its weight very ſenſibly increaſed thereby; and this happened, though only a moderate fire was uſed.

MERCURIUS ALCALIZATUS.

Alkalized mercury.

Take of
- Pure quickſilver, three drams;
- Prepared crabs-eyes, five drams.

Grind them together in a glaſs mortar, till the mercurial globules diſappear.

THIS preparation, which has never been received into the London pharmacopœia, and is now rejected from that of Edinburgh, is inſerted here on account of its being ſtill now and then called for, and held by ſome in conſiderable eſteem. It has never come much into common practice, the labour of making it having been a temptation to a grievous abuſe in its preparation, viz. the addition of an intermedium, which facilitates the union of the mercury with the crabs eyes, but greatly abates its medical powers. The medicine, when duly prepared, is an uſeful alterative; and may be given, in cutaneous or venereal caſes, from two or three grains to a ſcruple.

MERCURIUS SACCHARATUS.

Sugared mercury.

Edinb.

Take of
- Pure quickſilver,
- Brown ſugar-candy, of each half an ounce;
- Eſſential oil of juniper berries, ſixteen drops.

Grind them together in a glaſs mortar, until the mercury ceaſes to appear.

THE eſſential oil, here added, is ſaid to be a very uſeful ingredient; not only promoting the extinction of the quickſilver (which however is ſtill not a little difficult and tedious) but likewiſe improving the medicine. The intention, in this and the foregoing proceſs, is only to divide the mercury by the interpoſition of other bodies; for when thus managed (as already obſerved) it has very powerful effects; though whilſt undivided it ſeems to be altogether inactive. Sugar alone apparently anſwers this intention; but, on the commixture of aqueous fluids, the ſugar diſſolves by itſelf, leaving the mercury to run together again in its original form. The addition of the oil is ſaid in great meaſure to prevent this inconvenience. The doſe of this medicine, as an alterative, is from two or three grains to a ſcruple.

ÆTHIOPS MINERALIS.

Ethiops mineral.

Lond.

Take of
- Purified quickſilver,
- Flowers of ſulphur, unwaſhed, of each equal weights.

Grind them together, in a glaſs or ſtone mortar, until they are united.

Edinb.

Take of
- Purified quickſilver,

Flowers of ſulphur waſhed, each equal weights.

Grind them together in a glaſs mortar, with a glaſs peſtle, till the mercurial globules totally diſappear.

An ethiops is made alſo with a double quantity of mercury.

The union of the mercury and ſulphur might be greatly facilitated by the aſſiſtance of a little warmth. Some are accuſtomed to make this preparation in a very expeditious manner, by melting the ſulphur in an iron ladle, then adding the quickſilver, and ſtirring them together till the mixture be completed. The ſmall degree of heat here ſufficient, cannot reaſonably be ſuppoſed to do any injury to ſubſtances, which have already undergone much greater fires, not only in the extraction from their ores, but likewiſe in the purifications of them directed in the pharmacopœia. In the following proceſs, they are expoſed in conjunction to a ſtrong fire, without ſuſpicion of the compound's receiving any ill quality from it. Thus much is certain, that the ingredients are more perfectly united by heat, than by the degree of the triture uſually beſtowed upon them. From the ethiops prepared by triture, part of the mercury is apt to be ſpued out on making it into an electary or pills. From that made by fire, no ſeparation is obſerved to happen.

Ethiops mineral is one of the moſt inactive of the mercurial preparations. Some practitioners have boldly aſſerted its poſſeſſing extraordinary virtues; and moſt people imagine it a medicine of ſome efficacy. But what benefit is to be expected from it in the common doſes of eight or ten grains, or a ſcruple, may be judged hence, that it has been taken in doſes of ſeveral drams, and continued for a conſiderable time, without producing any remarkable effect. Sulphur eminently abates the power of all the more active minerals, and ſeems to be at the ſame time reſtrained by them from operating in the body itſelf. Boerhaave, who is in general ſufficiently liberal in the commendation of medicines, diſapproves the ethiops in very ſtrong terms. "It cannot enter the abſorbent veſſels, the lacteals or lymphatics; but paſſes directly through the inteſtinal tube, where it may happen to deſtroy worms, if it operate luckily. They are deceived who expect any other effects from it; at leaſt I could never find them. I am afraid, it is unwarily given, in ſuch large quantities, to children and perſons of tender conſtitutions. As being a foreign maſs, unconquerable by the body, it is the more to be ſuſpected, ſince it there continues long, ſluggiſh and inactive. It does not raiſe a ſalivation, becauſe it cannot come into the blood. Who knows the effects of a ſubſtance, which, ſo long as it remains compounded, ſeems no more active than any ponderous inſipid earth?" The ethiops, with a double proportion of mercury, now received into the Edinburgh pharmacopœia, has a greater chance of operating as a mercurial; and probably the quantity of mercury might be ſtill further increaſed to advantage.

CINNABARIS FACTITIA,

Artificial cinnabar.

Lond.

Take of

Purified quickſilver, twenty-five ounces.

Sulphur, ſeven ounces.

Melt the ſulphur, and mix into it the quickſilver. If the mixture happen to catch flame, extinguiſh it by covering the veſſel. The matter is afterwards to be reduced into powder and ſublimed.

Edinb.

Take of
 Purified quickſilver, three pounds and a half;
 Flowers of ſulphur, waſhed, one pound.

Melt the ſulphur in a large iron veſſel, over a gentle fire, and add to it by degrees the quickſilver previouſly heated, ſtirring them conſtantly together with an iron ſpatula, that they may be perfectly mixed. Immediately fit upon the veſſel a wooden cover, to prevent the mixture from taking fire. Before the matter is grown cold, grind it into powder, and ſublime according to art.

It has been cuſtomary to order a larger quantity of ſulphur than here directed; but theſe ſmaller proportions anſwer better; for the leſs ſulphur, the finer coloured is the cinnabar.

As ſoon as the mercury and ſulphur begin to unite, a conſiderable exploſion frequently happens, and the mixture is very apt to take fire, eſpecially if the proceſs be ſomewhat haſtily conducted. This accident the operator will have previous notice of, from the matter's ſwelling up, and growing ſuddenly conſiſtent. As ſoon as this happens, the veſſel muſt be immediately cloſe covered.

During the ſublimation, care muſt be taken that the matter riſe not into the neck of the veſſel ſo as to block up and burſt the glaſs. To prevent this, a wide-necked bolthead, or rather an oval earthen jar, coated, ſhould be choſen for the ſubliming veſſel. If the former be employed, it will be convenient to introduce, at times, an iron wire, ſomewhat heated, in order to be the better aſſured that the paſſage is not blocking up; the danger of which may be prevented, by cautiouſly raiſing the veſſel higher from the fire.

If the ingredients were pure, no feces will remain. In ſuch caſe, the ſublimation may be known to be over, by introducing a wire as before, and feeling the bottom of the veſſel, which will then be perfectly ſmooth. If any roughneſs or inequalities be perceived, either the mixture was impure, or the ſublimation is not completed; if the latter be the caſe, the wire will ſoon be covered with the riſing cinnabar.

The preparers of cinnabar in large quantity, employ earthen jars, which in ſhape pretty much reſemble an egg. Theſe are of different ſizes, according to the quantity intended to be made at one ſublimation, which ſometimes amounts to two hundred weight. The jar is uſually coated from the ſmall end, almoſt to the middle, to prevent its breaking, from the vehemence or irregularity of the fire. The greater part, which is placed uppermoſt, not being received within the furnace, has no occaſion for this defence. The whole ſecret, with regard to this proceſs, is (1) the management of the fire, which ſhould be ſo ſtrong as to keep the matter continually ſubliming to the upper part of the jar, without coming out of its mouth, which is covered with an iron plate; (2) to put into the ſubliming veſſel only ſmall quantities of the mixture at a time.

A method is mentioned in the practical chemiſtry of making cinnabar without ſublimation, by agitating or digeſting mercury in the volatile tincture of ſulphur, already deſcribed. I have found a ſulphureous liquor, more eaſily preparable, to have a like effect. The ſolution for *lac ſulphuris* will, with ſome addreſs, ſucceed.

The principal uſe of cinnabar is as a pigment. It was formerly held in great eſteem as a medicine, in cutaneous foulneſſes, gouty and rheumatic pains, epileptic caſes, &c. but, of late, it has loſt much of its reputation. It appears to be nearly ſimilar to the *ethiops*, already ſpoken of. Cartheuſer relates, that having given cinnabar in large quantities to a dog, it produced no ſenſible effect, but was partly voided along with the fèces unaltered, and partly found entire in the ſtomach and inteſtines upon opening the animal. The celebrated Frederick Hoffman, after beſtowing high encomiums on this preparation, as having, in many inſtances within his own knowledge, perfectly cured epilepſies and vertigoes from contuſions of the head (where it is probable, however, that the cure did not ſo much depend upon the cinnabar, as on the ſpontaneous recovery of the parts from the external injury), obſerves, that the large repeated doſes neceſſary for having any effect, can be borne only where the firſt paſſages are ſtrong; and that if the fibres of the ſtomach and inteſtines be lax and flaccid, the cinnabar, accumulated and concreting with the mucous matter of the parts, occaſions great oppreſſion; which ſeems to be an acknowledgment that the cinnabar is not ſubdued by the powers of digeſtion, and has no proper medicinal activity. There are indeed ſome inſtances of the daily uſe of cinnabar's having brought on a ſalivation: perhaps becauſe the cinnabar, made uſe of in thoſe caſes, contained a leſs proportion of ſulphur than the ſorts commonly met with. The regulus of antimony, and even white arſenic, when combined with a certain quantity of common ſulphur, ſeem to have their deleterious power deſtroyed: on ſeparating more and more of the ſulphur, they exert more and more of their proper virulence. It does not ſeem unreaſonable to preſume, that mercury may have its activity varied in like manner; that when perfectly ſatiated with ſulphur, it may be inert; and that when the quantity of ſulphur is more and more leſſened, the compound may have greater and greater degrees of the proper efficacy of mercurials.

Cinnabar is ſometimes uſed in fumigations againſt venereal ulcers in the noſe, mouth, and throat. Half a dram of it burnt, the fume being imbibed with the breath, has occaſioned a violent ſalivation. This effect is by no means owing to the medicine as cinnabar. When ſet on fire, it is no longer a mixture of mercury and ſulphur; but mercury reſolved into fume, and blended in part with the volatile vitriolic acid; in either of which circumſtances, this mineral, as already obſerved, has very powerful effects.

MERCURIUS CALCINATUS.
Calcined mercury.
Lond.

Put purified quickſilver into a broad-bottomed glaſs veſſel, having a ſmall hole open to the air; and keep it in a conſtant heat, in a ſand-furnace, for ſeveral months, until it is calcined into a red powder.

This tedious proceſs might, in all probability, be greatly expedited, by employing, inſtead of a veſſel with a ſmall aperture, a very wide-mouthed, flat-bottomed glaſs body, of ſuch a height that the mercury may not eſcape. By theſe means, the air, which is eſſentially neceſſary to the calcination of all metallic ſubſtances, will be more freely admitted. A veſſel might be ſo contrived, as to occaſion a continual flux of air over the ſurface of the mercury.

This preparation is by ſome highly eſteemed in venereal caſes, and ſuppoſed to be the moſt efficacious and certain of all the mercurials. It may be advantageouſly given in conjunction with opiates. A bolus or pill, containing from half a grain to two grains of this calx, and a quarter or half a grain or more of opium, with the addition of ſome warm aromatic ingredient, may be taken every night. Thus managed, it acts mildly, though powerfully, as an alterative and diaphoretic. Given by itſelf in larger doſes, as four or five grains, it proves a rough emetic and cathartic.

MERCURII SOLUTIO.

Solution of mercury.

Edinb.

Take equal quantities of pure quickſilver, and double aquafortis. Digeſt them together, in a phial placed in a ſand-furnace, that a limpid ſolution may be made.

Aquafortis diſſolves mercury more eaſily, and in larger quantity, than any other acid. Sixteen ounces, if the menſtruum be very ſtrong and pure, will take up eleven or twelve. As the liquor grows cold, a conſiderable part concretes, at the bottom of the veſſel, into a cryſtalline form. If the whole be wanted to remain ſuſpended, a proper quantity of water ſhould be added after the ſolution is completed.

This proceſs is given only as preparatory to ſome of the following ones. The ſolution is highly cauſtic, ſo as ſcarce to be ſafely touched. It ſtains the ſkin purple or black.

CALX MERCURII.

Calx of mercury.

Edinb.

Take any quantity of the ſolution of mercury, and evaporate it over a gentle fire, till a white dry maſs remains.

This calx, or rather ſalt, of mercury, is violently corroſive. It is rarely made uſe of any otherwiſe than for the following preparation and the corroſive ſublimate.

MERCURIUS CALCINATUS, vulgo PRÆCIPITATUS RUBER.

Red calx of mercury, commonly called red precipitate.

Edinb.

Take any quantity of the calx of mercury, and reverberate it in a crucible, with ſucceſſive degrees of heat. Its white colour will change firſt into a brown, and afterwards a yellow. At length, upon increaſing the fire, it paſſes into a deep red.

MERCURIUS CORROSIVUS RUBER.

The red mercurial corroſive.

Lond.

Take of
Purified quickſilver,
Compound aquafortis, already deſcribed, of each equal weights.

Mix, and ſet them in a broad-bottomed veſſel, in a ſand-heat, till all the humidity is exhaled, and the maſs has acquired a red colour.

The marine acid in the compound menſtruum, ordered in this laſt proceſs, diſpoſes the mercurial calx to aſſume the bright ſparkling look admired in it; which, though perhaps no advantage to it as a medicine, ought nevertheleſs to be inſiſted on by the buyer as a mark of its goodneſs and ſtrength. As ſoon as the matter has gained this appearance, it ſhould be immediately removed from the fire, otherwiſe it will ſoon loſe it again. The preparation of this red precipitate, as it is called, in perfection, is ſuppoſed by ſome to be a ſecret not known to our chemiſts; ſo that we are under a neceſſity of importing it from abroad. This reflection ſeems to be founded on miſinformation. We ſometimes indeed receive conſiderable quantities from Holland; but this depends upon the ingredients being commonly cheaper there than with us, and not upon any ſecret in the manner of the preparation.

This precipitate is, as its title imports, an eſcharotic, and in this intention is frequently employed by the ſurgeons, with baſilicum, and other dreſſings, for conſuming fungous fleſh in ulcers, and the like purpoſes. It is ſubject to great uncertainty in point of ſtrength; more or leſs of the acid exhaling, according to the degree and continuance of the fire. The beſt criterion of its ſtrength, as already obſerved, is its brilliant appearance; which is alſo the mark of its genuineneſs. If mixed with minium, which it is ſometimes ſaid to be, the duller hue will diſcover the abuſe. This admixture may be more certainly detected by means of fire. The mercurial part will totally evaporate, leaving the minium behind.

Some have ventured to give this medicine internally, in venereal, ſcrophulous, and other obſtinate chronic diſorders, in doſes of two or three grains, and more. But certainly the milder mercurials, properly managed, are capable of anſwering all that can be expected from this; without occaſioning violent anxieties, tormina of the bowels, and other ill conſequences, which the beſt management can ſcarcely prevent this corroſive preparation from ſometimes doing. The chemiſts have contrived many methods of correcting and rendering it milder, by diveſting it of a portion of the acid; but to no very good purpoſe, as they either leave the medicine ſtill too corroſive, or render it ſimilar to others which are procurable at an eaſier rate.

MERCURIUS CORALLINUS.

Coralline mercury.

Lond.

Pour on the red mercurial corroſive about thrice its weight of rectified ſpirit of wine, and digeſt them together, with a gentle heat, for two or three days; frequently ſhaking the veſſel. Then ſet fire to the ſpirit, keeping the powder continually ſtirring till all the ſpirit is burnt away.

It is ſuppoſed, that all the more violent preparations of this kind, compoſed of metallic bodies united with acids, are rendered milder by digeſtion in ſpirit of wine: the acid being dulcified, or in part abſorbed by the ſpirit. This evidently happens in ſome caſes, where the proportion of acid is large, or ſufficient to render the compound ſoluble in water: but that it happens equally in others, I cannot affirm. Thus much is certain, that the mercurius corallinus, whether from this cauſe, or barely from ſome of the acid's being diſſipated by the heat of the burning ſpirit, proves conſiderably milder than the corroſive was at firſt. It is ſtill, however, a medicine of great activity, and ſeems to be ſcarce ſufficiently ſafe for internal uſe. A few grains of it generally prove cathartic or emetic, and ſometimes occaſion violent ſymptoms.

ARCANUM CORALLINUM.
The coralline ſecret.

Take five ounces of the red mercurial corroſive, and eight ounces of ſpirit of nitre. Diſtil off the ſpirit in a retort. Return it with four ounces of freſh ſpirit of nitre upon the reſiduum, and draw it off again as before. Repeat this proceſs with four ounces of new ſpirit; and at laſt keep the fire up very ſtrong, for at leaſt two hours. The powder, which remains in the retort, is to be put into a crucible, and kept of a worm-red heat for ſeven or eight minutes: then boil it for half an hour, in three pints of pure water: diſtil from it twelve ounces of tartarized ſpirit of wine, cohobating the ſpirit twice: digeſt it for forty-eight hours in a ſand-heat, with the ſame quantity of freſh tartarized ſpirit; raiſing the fire towards the end, ſo as to make the ſpirit ſimmer a little: afterwards ſuffer the whole to cool, decant off the ſpirit, and dry the powder for uſe.

THIS preparation, notwithſtanding its pompous name, is a very unthrifty and injudicious one. The cohobation of ſpirit of nitre upon the corroſive, anſwers no uſeful purpoſe; for, whatever the acid communicates, is afterwards diſſolved and ſeparated by the water. If the direction of keeping up a ſtrong fire for ſome time, after the laſt diſtillation, is not ſtrictly complied with, all the mercury will diſſolve in the water, and the ſolution will prove ſimilar to the *ſolutio mercurii* above deſcribed.

PULVIS PRINCIPIS.
Prince's powder.

Grind eight ounces of the red mercurial corroſive into a fine powder; and digeſt it with two quarts of water, in an almoſt boiling heat, for twelve hours, occaſionally ſtirring up the powder from the bottom: then pour off the liquor, and digeſt the powder in freſh water as before; repeating this proceſs a third time. The laſt water being poured off, grind the powder with double its weight of fixt alkaline ſalt, and digeſt it as at firſt, in freſh waters, till it becomes inſipid. Afterwards boil it in ſpirit of wine; and, laſtly, pouring off the ſpirit, dry the powder for uſe.

PANACEA MERCURII RUBRA.
Red panacea of mercury.

Digeſt the red mercurial corroſive with eight times its weight of water, for twenty-four hours, ſhaking the veſſel three or four times: pour off the water, dry the powder, and digeſt it with eight times its weight of ſpirit of wine, for fifteen days. The ſpirit being then decanted off, burn upon the calx twice its weight of tincture of ſulphur: afterwards digeſt it two or three days longer in freſh ſpirit of wine; and in the laſt place, exſiccate it for uſe.

THE three foregoing preparations have been kept in particular hands as ſecrets. At bottom they are all nearly the ſame, and much too trivial to deſerve the pains taken about them. They are perhaps further diveſted of acid than the *mercurius corallinus* of the ſhops; but have this diſadvantage, that the quantity of acid ſeparated in the troubleſome digeſtions, &c. muſt vary according to different circumſtances in the operation. All the four ſtand recommended in ſmall doſes, two grains for inſtance, as excellent alterants and diaphoretics: in larger ones, they prove emetic and cathartic.

MERCURIUS CORROSIVUS SUBLIMATUS, vel ALBUS.

The white mercurial corroſive, or corroſive mercury ſublimate.

Lond.

Take of

Purified quickſilver, forty ounces;

Sea ſalt, thirty-three ounces;

Nitre, twenty-eight ounces;

Calcined green vitriol, ſixty-ſix ounces.

Grind the quickſilver, in a wooden or ſtone mortar, with an ounce or more of corroſive mercury ſublimate already made, until the quickſilver be divided into ſmall grains: this mixture is to be ground with the nitre, and afterwards with the ſea ſalt. Then add the calcined vitriol, continuing the triture only for a little time longer, leſt the quickſilver ſhould run together again. Laſtly, proceed to ſublimation, in a glaſs matraſs; to which you may adapt a head, in order to ſave a little ſpirit that will come over.

It has been ſuppoſed, that corroſive ſublimate participates of all the ingredients employed in this proceſs; though it is certain, that it conſiſts only of mercury and the acid of the ſea ſalt united together. The materials being mixed and expoſed to the fire, firſt the vitriol parts with its acid; which, diſlodging thoſe of the nitre and marine ſalt, takes their place. The marine acid, reſolved into fume and aſſiſted by the nitrous, diſſolves the mercury now alſo ſtrongly heated. This acid, though it very difficultly acts on mercury, yet when thus once united with it, is more ſtrongly retained thereby than any other acid. The nitrous ſpirit, therefore, having nothing to retain it (for its own baſis, and that of the ſea ſalt are both occupied by the vitriolic; and that which the vitriolic forſook to unite with theſe, is now ſcarcely combinable with it), ariſes; leaving the mercury and marine acid to ſublime together, when the heat ſhall be ſtrong enough to elevate them. Some ſmall portion of the marine ſpirit ariſes along with the nitrous; and hence this compound acid has been uſually employed, inſtead of the *aquafortis compoſita*, to which it is ſimilar, for making the red corroſive.

It appears, therefore, that the vitriol, and the baſes of the nitre and ſea ſalt, are of no further uſe in this proceſs, than as convenient intermedia for facilitating the union of the mercury with the marine acids. They likewiſe ſerve to afford a ſupport for the ſublimate to reſt upon, which thus aſſumes the form it is expected in, that of a placenta or cake. The deſign of adding a little ſublimate already made is to facilitate the extinction of the mercury, or its mixture with the other materials.

There are ſundry other ways of making this preparation, or of combining mercury with the marine acid. If mercury corroded by the vitriolic acid into a white maſs (as for making the yellow mercurial emetic or turpeth mineral deſcribed hereafter) be mixed with an equal quantity of ſea ſalt and ſet to ſublime; the vitriolic acid will quit the mercury to unite with the baſis of the ſea ſalt; and the acid of the ſea ſalt, now ſet at liberty, will unite with the mercury, and ſublime with it into the compound required. The diſcovery of this method is generally attributed to Boulduc; though it is found alſo in Kunckel's *laboratorium chymicum.*

If the mercury be corroded by the nitrous acid inſtead of the vitriolic, the event will be the ſame; that acid equally quitting the mercury, and ſetting looſe the marine. This method the college of Edinburgh have received.

Edinb.

Take
Calx of mercury (that is, a ſolution of mercury in aquafortis, evaporated to a dry white maſs),
Decrepitated ſea ſalt, of each equal quantities.

Powder, and mix theſe well together; and put them into a matraſs, of which they may nearly fill one half. Place the veſſel in a ſand-furnace, and proceed to ſublimation; applying at firſt a gentle heat, and afterwards increaſing it, till all the ſublimate has ariſen, in a white cryſtalline maſs, to the upper part of the matraſs. Separate this from the red ſcoria, and purify it, if needful, by a ſecond ſublimation.

The ſublimate made by this method is the ſame with the foregoing; but as the quantity of fixt matter is ſmall, it difficultly aſſumes the form of a cake. It requires indeed ſome ſkill in the operator, to give it this appearance when either proceſs is followed. When large quantities are made, this form may be eaſily obtained, by placing the matraſs no deeper in the ſand than the ſurface of the matter contained in it; and removing a little of the ſand from the ſides of the glaſs, as ſoon as the flowers begin to appear in the neck; when the heat ſhould likewiſe be ſomewhat lowered, and not at all raiſed during the whole proceſs. The ſublimation is known to be completed when the edges of the cryſtalline cake, which will form upon the ſurface of the caput mortuum, appear ſmooth and even, and a little removed from it.

Our apothecaries rarely, and few even of the chemiſts, attempt the making of this preparation themſelves; greateſt part of what is uſed among us comes from Venice and Holland. This foreign ſublimate has been reported to be adulterated with arſenic. Some affirm that this dangerous fraud may be diſcovered by the ſublimate's turning black on being moiſtened with alkaline ley; which by others is denied. As this point ſeemed of ſome importance to be determined, I made ſundry experiments with this view, which convinced me of the inſufficiency of alkalies for diſcovering arſenic. Alkaline ley, poured into a ſolution of pure arſenic, and into a mixture of the two ſolutions in different proportions, produced no blackneſs in any: and though the pure ſublimate, and the mixtures of it with arſenic, exhibited ſome differences in theſe trials, yet theſe differences were neither ſo conſtant, nor ſo ſtrongly marked, as to be laid down, univerſally, for criteria of the preſence or abſence of arſenic. Different ſpecimens of ſublimate, known to be pure, differed conſiderably in this reſpect; probably from their holding a little more or leſs mercury in proportion to the acid, or from their retaining ſome ſmall portion of thoſe acids which were employed in the preparation as intermedia.

Some chemiſts deny the practicability of this adulteration. There is a proceſs common in books of chemiſtry, wherein ſublimate and arſenic being mixed together and ſet to ſublime, they do not ariſe in one maſs, or yield any thing ſimilar to the preparation here intended: the arſenic abſorbs the acid of the ſublimate, and is reduced thereby into a liquid or butyraceous conſiſtence; while the mercury, thus freed from the acid, diſtils in its running form: if the quantity of arſenic be inſufficient to decompound the whole of the ſublimate, the remainder of the ſublimate concretes diſtinct from the arſenical butter. Whence they conclude, that arſenic and ſublimate cannot be united together into a cryſtalline cake, the form in which this preparation is brought to us.

The above experiment is not altogether deciſive; for though arſenic and ſulphur do not aſſume the required form by the common proceſs, it is poſſible they may by ſome other management. It will therefore (though I have never found any reaſon to ſuſpect that the abuſe is practiſed) be proper to point out means for the ſatiſfaction of thoſe, who may be deſirous of convincing themſelves of the genuineneſs of this important preparation. Let ſome of the ſublimate, powdered in a glaſs mortar, be well mixed with twice its weight of black flux, and a little filings or ſhavings of iron: put the mixture into a crucible capable of holding four or five times as much; give a gradual fire till the ebullition ceaſes, and then haſtily increaſe it to a white heat. If no fumes of the garlic ſmell can be perceived during the proceſs; and if the particles of iron retain their form, without any of them being melted; I think we may be ſecure that the mixture contained no arſenic.

Sublimate is a moſt violent corroſive, preſently corrupting and deſtroying all the parts of the body it touches. A ſolution of it in water, in the proportion of about a dram to a quart, is made uſe of for keeping down proud fleſh, and cleanſing foul ulcers, and a more dilute ſolution as a coſmetic, and for deſtroying cutaneous inſects. But a great deal of caution is requiſite even in theſe external uſes of it.

Some have nevertheleſs ventured to give it internally, in the doſe of one-tenth or one-eighth of a grain. Boerhaave relates, that if a grain of it be diſſolved in an ounce or more of water, and a dram of this ſolution, ſoftened with ſyrup of violets, taken twice or thrice a day, it will perform wonders in many reputed incurable diſtempers; but particularly cautions us not to venture upon it, unleſs the method of managing it be well known.

Sublimate diſſolved in vinous ſpirits has of late been given internally in larger doſes; from a quarter of a grain to half a grain. This method of uſing it was brought into vogue by baron Van Swieten at Vienna, particularly for venereal maladies; and ſeveral trials of it have been made in this kingdom alſo with ſucceſs. Eight grains of the ſublimate are diſſolved in ſixteen ounces of rectified ſpirit of wine or proof ſpirit; the rectified ſpirit diſſolves it more perfectly, and ſeems to make the medicine milder in its operation, than the proof ſpirit of the original preſcription of Van Swieten. Of this ſolution, doſes from one to two ſpoonfuls, that is, from half an ounce to an ounce, are given twice a day, and continued till all the ſymptoms are removed; obſerving to uſe a low diet, with plentiful dilution, otherwiſe the ſublimate is apt to purge, and gripe ſeverely. It generally purges more or leſs at the beginning, but afterwards ſeems to operate chiefly by urine and perſpiration.

Sublimate conſiſts of mercury united with a large quantity of marine acid. There are two general methods of deſtroying its corroſive quality, and rendering it mild; combining with it ſo much freſh mercury as the acid is capable of taking up, and ſeparating a part of the acid by means of alkaline ſalts, and the like. On the firſt principle, mercurius dulcis is formed; on the latter, white precipitate.

MERCURIUS DULCIS SUBLIMATUS.

Dulcified mercury ſublimate.

Lond.

Take of

Corroſive mercury ſublimate, one pound;

Purified quickſilver, nine ounces,

Having powdered the ſublimate, add to it the quickſilver, and digeſt them together in a matraſs, with a gentle heat of ſand, until they unite; then, increaſing the heat, let the mixture be ſublimed. The ſublimed matter, freed from the acrimonious part at top and ſuch mercurial globules as happen to appear diſtinct in it, is to be reduced into powder, and ſublimed again; and this ſublimation repeated ſix times.

Edinb.

Take of

Corroſive mercury ſublimate, reduced to powder in a glaſs mortar, four ounces;

Pure quickſilver, three ounces and an half.

Mix them well together, by long trituration in a glaſs or marble mortar, until the quickſilver ceaſes to appear; taking care to avoid the finer powder that flies off. Put the powder into an oblong phial, of ſuch a ſize, that only one third of it may be filled; and ſet the glaſs in a ſand furnace, ſo as that the ſand may reach up to one half its height. By degrees of fire ſucceſſively applied, almoſt all the mercury will ſublime, and adhere to the upper part of the veſſel. The glaſs being then broken, and the red powder which is found in its bottom, with the whitiſh one that ſticks about the neck, being thrown away, let the white mercury be ſublimed again three or four times.

The trituration of corroſive ſublimate with quickſilver is a very noxious operation. For it is almoſt impoſſible, by any care, to prevent the lighter particles of the former from ariſing, ſo as to affect the operator's eyes and mouth. It is nevertheleſs of the utmoſt conſequence, that the ingredients be perfectly united before the ſublimation is begun: this may be moſt commodiouſly effected, by the digeſtion ordered in the firſt of the above proceſſes. It is indeed ſtill neceſſary to pulverize the ſublimate, before the mercury is added to it; but this may be ſafely performed, with a little caution; eſpecially, if during the pulverization, the matter be now and then ſprinkled with a little ſpirit of wine. This addition does not at all impede the union of the ingredients, or prejudice the ſublimation: it will be convenient not to cloſe the top of the ſubliming veſſel with a cap of paper at firſt (as is uſually practiſed) but to defer this till the mixture begins to ſublime, that the ſpirit may eſcape.

The rationale of this proceſs deſerves particular attention; and the more ſo, as a miſtaken theory herein has been productive of ſeveral errors with regard to the operation of mercurials in general. It is ſuppoſed, that the dulcification, as it is called, of the *mercurius corroſivus*, is owing to the ſpiculæ or ſharp points, on which its corroſiveneſs depends, being broken and worn off by the frequent ſublimations. If this opinion were juſt, the corroſive would become mild, without any addition, barely by repeating the ſublimation; but this is contrary to all experience. The abatement of the corroſive quality of the ſublimate is entirely owing to the combination of ſo much freſh mercury with it, as is capable of being united; and by whatever means this combination is effected, the preparation will be ſufficiently dulcified. Triture and digeſtion promote the union of the two, whilſt ſublimation tends rather to diſunite them. The prudent operator, therefore, will not be ſolicitous about ſeparating ſuch mercurial globules as appear diſtinct after the firſt ſublimation. He will endeavour rather to combine them with the reſt, by repeating the triture and digeſtion.

The college of Wirtemberg require their *mercurius dulcis* to be only twice ſublimed; and the Auguſtan but once; and Neumann propoſes making it directly, by a ſingle ſublimation, from the ingredients which the corroſive ſublimate is prepared from, by only taking the quickſilver in a larger proportion. If the medicine, made after either of theſe methods, ſhould prove in any degree acrid, water, boiled on it for ſome time, will diſſolve and ſeparate that part in which its acrimony conſiſts. The marks of the preparation being ſufficiently dulcified, are, its being perfectly inſipid to the taſte, and indiſſoluble by long boiling in water. Whether the water, in which it has been boiled, has taken up any part of it, may be known by dropping into the liquor a ley of any fixt alkaline ſalt, or any volatile alkaline ſpirit: if the decoction has any mercurial impregnation, it will grow turbid on this addition: if otherwiſe, it will continue limpid. But here care muſt be taken not to be deceived by an extraneous ſaline matter in the water itſelf: moſt of the common ſpring waters turn milky on the addition of alkalies; and therefore, for experiments of this kind, diſtilled water, or rain water, ought to be uſed.

Mercurius dulcis, ſeven times ſublimed, has been commonly called *Calomelas*, and *Aquila alba*; names which are now dropt both by the London and Edinburgh colleges. *Calomelas* is indeed a very improper name for a white preparation, the word implying a black colour. By grinding mercurius dulcis with volatile ſpirits, it becomes blackiſh, and this perhaps is the true calomel.

Mercurius dulcis appears to be one of the beſt and ſafeſt preparations of this mineral for general uſe, whether intended to act as a ſialogogue, diaphoretic, or alterant. Many of the more elaborate proceſſes are no other than attempts to produce from mercury ſuch a medicine as this really is. The doſe, for raiſing a ſalivation, is ten or fifteen grains, taken in the form of a bolus or pills, every night or oftener, till the ptyaliſm begins. As an alterant and diaphoretic, it is given in doſes of five or ſix grains; a purgative being occaſionally interpoſed, to prevent its affecting the mouth. It anſwers, however, much better, when given in ſmaller quantities, as one, two, or three grains every morning and evening, in conjunction with ſuch ſubſtances as determine its action to the ſkin, as the extract or reſin of guaiacum; the patient at the ſame time keeping warm, and drinking liberally of warm diluent liquors. By this method of managing it, obſtinate cutaneous and venereal diſtempers have been ſucceſsfully cured, without any remarkable increaſe of the ſenſible evacuations.

PANACEA MERCURII.
Mercurial panacea.

Take any quantity of levigated calomel, and four times as much ſpirit of wine. Digeſt them together in a ſand-heat for twenty days, frequently ſhaking the veſſel; then pour off the ſpirit, and dry the powder for uſe.

THIS preparation differs very little, if at all, from the foregoing; for, as Lemery obſerves, the ſpirit of wine does not diſſolve any part of the calomel. Some chemiſts have therefore recommended a proof ſpirit, or common water, as more ſuitable for this purpoſe than rectified ſpirit. If any part indeed of the calomel remains not ſufficiently dulcified, this will be diſſolved by boiling in water, and conſequently the preparation becomes milder; but if the calomel be well made, even water will have no effect upon it; the mercury and ſpirit of ſalt being ſo cloſely united to each other, as not to admit of any ſeparation by the means here propoſed. Nor indeed does good mercurius dulcis want any of its acid to be taken away, as being already ſufficiently ſafe, and mild in its operation. The Edinburgh college therefore, who received this preparation in former editions of their pharmacopœia, have now rejected it.

MERCURIUS PRÆCIPITATUS ALBUS.
White precipitate of mercury.
Edinb.

Diſſolve ſublimate corroſive mercury in a ſufficient quantity of hot water, and gradually drop into the ſolution ſome ſpirit of ſal ammoniac, as long as any precipitation enſues. Waſh the precipitated powder upon a filter, with ſeveral freſh quantities of warm water.

THIS preparation is uſed chiefly in ointments, in which intention its fine white colour is no ſmall recommendation to it. For internal purpoſes, it is rarely employed, nor is it at all wanted. It is nearly ſimilar to mercurius dulcis, but leſs certain in its effects. Corroſive ſublimate, as we have already ſeen, conſiſts of mercury united with a large proportion of acid: it is there dulcified by adding as much freſh mercury as is ſufficient to ſatiate all the acid; here, by ſeparating all the acid that is not ſatiated. This laſt way ſeems an unfrugal one, on account not only of the loſs of the acid, but of the volatile ſpirit neceſſary for abſorbing it. The operator may however, if it ſhould be thought worth while, recover the volatile ſalt from the liquor, by adding to it, after the precipitate has been ſeparated, a proper quantity of potaſh, and diſtilling with a gentle heat, in the ſame manner as for the ſpirit or volatile ſalt of ſal ammoniac; for a true ſal ammoniac is regenerated, in the precipitation, from the union of the volatile ſpirit with the marine acid of the ſublimate. It is by no means adviſable to uſe the liquor itſelf as a ſolution of ſal ammoniac, or to ſeparate the ſal ammoniac from it by evaporation and cryſtallization, as a part of the mercury might be retained, and communicate dangerous qualities: but the volatile ſalt ſeparated by diſtillation may be uſed without fear of its containing any mercury, none of which will ariſe with the heat by which volatile ſalts are diſtilled.

Fixt alkalies anſwer as effectually, for precipitating ſolutions of ſublimate, as the volatile. But the precipitate, obtained by means of the former, inſtead of being white as with the latter, is generally of a reddiſh yellow or orange colour. If ſal ammoniac be diſſolved along with the ſublimate, the addition of fixt alkalies will now, extricating the volatile alkali of the ſal ammoniac, occaſion as white a precipitation, as if the volatile alkali had been previouſly ſeparated and employed in its pure ſtate: and this compendium is now allowed by the London college. The proceſs is as follows.

Lond.

Take
  Sublimate corroſive mercury,
  Sal ammoniac, of each equal weights.
Diſſolve them both together in water, filter the ſolution, and precipitate it with a ſolution of any fixt alkaline ſalt. Waſh the precipitated powder, till it is perfectly ſweet (that is, inſipid or void of acrimony).

Here the ſal ammoniac, beſides its uſe in the capital intention, to make a white precipitation, promotes the ſolution of the ſublimate; which, of itſelf, is difficultly, and ſcarce at all totally ſoluble by repeated boiling in water. For, however ſkilfully it is prepared, ſome part of it will have an underproportion of acid, and conſequently approach to the ſtate of mercurius dulcis. A good deal of care is requiſite in the precipitation. For, if too large a quantity of the fixt alkaline ſolution be imprudently added, the precipitate will loſe the elegant white colour for which it is valued.

A precipitate of a different nature from the preceding has been commonly diſtinguiſhed by the ſame name, mercurius præcipitatus albus; the preparation of which, in a preceding edition of the Edinburgh pharmacopœia, is as follows.

Take any quantity of the ſolution of mercury (made in aquafortis) and pour into it, by little and little, ſome very ſtrong brine of ſea ſalt, until all the quickſilver is precipitated in form of a very white powder; which is to be waſhed upon a filter with warm water, till the water comes off without any acrimony. The powder is then to be put betwixt the folds of paper, and dried with a very gentle heat.

This is a very unfrugal preparation. For, ſea ſalt, in whatever proportion it be added, will not precipitate all the mercury: this evidently appears upon adding a ſmall quantity of a ſolution of fixt alkaline ſalt, or volatile alkaline ſpirit, to the liquor which remains after the precipitate is fallen, when it will again grow turbid, and let fall a conſiderable quantity of freſh precipitate. Homberg obſerves, that if the acid ſpirit bear an overproportion to the mercury in the ſolution, no precipitation at all will follow upon the affuſion of the brine of ſea ſalt. If the precipitate be waſhed too often with hot water, it will all diſſolve and paſs the filter. The ſame accident will likewiſe happen, if the brine employed at firſt to throw down the mercury be ſuffered to ſtand too long upon the precipitate.

Some have been accuſtomed to ſubſtitute the above officinal white precipitate in the place of this; but very injudiciouſly. The firſt is ſo mild, as not improperly to deſerve the appellation by which it is diſtinguiſhed in the former Edinburgh pharmacopœia, *dulcis*; whilſt this laſt is ſo far corroſive, as to be employed by the farriers for the purpoſes of an eſcharotic. Internally, it is among us very rarely made uſe of; notwithſtanding the character given of it by Boerhaave, of being "perhaps the beſt remedy "hitherto afforded by mercury." Mercurius dulcis produces the good effects which this is ſuppoſed to do, with a greater degree of certainty, and without diſordering the conſtitution, occaſioning vomits, &c. which this precipitate, in a doſe of two or three grains, frequently does.

MERCURIUS PRÆCIPITATUS FUSCUS, vulgo WURTZII.

Brown, commonly called Wurtz's, precipitate.

Take any quantity of a ſolution of mercury (made in aquafortis) and gradually drop into it oil of tartar per deliquium, till the efferveſcence ceaſes. A powder will precipitate, which is to be edulcorated as the foregoing.

THIS preparation was in conſiderable eſteem ſome years ago, but at preſent is rarely or never made uſe of, and hence it is now rejected both by the London and Edinburgh colleges. It does not ſeem to differ in ſtrength or effects from the ſweet precipitate.

MERCURIUS PRÆCIPITATUS VIRIDIS.

Green precipitate of mercury.

Edinb.

Diſſolve four ounces of corroſive ſublimate mercury (previouſly reduced to powder) in a quart of hot water.

Digeſt an ounce and a half of copper filings, with eight ounces of ſpirit of ſal ammoniac, in a matraſs, until a deep blue tincture be extracted.

Filter the tincture, and drop it by degrees into the mercurial ſolution. When the precipitate has fallen, evaporate in a ſand-heat to dryneſs.

THIS differs from the ſweet precipitate, in containing an admixture of copper, which renders it an emetic too rough to be uſed internally with ſafety: and hence the preſent practice has almoſt entirely rejected it.

This preparation is conſiderably different from the green precipitate of foreign pharmacopœias. There, the proportion of copper, contained in the preparation when finiſhed, is much greater; for, though the quantity directed to be taken is leſs, yet aquafortis being employed for the menſtruum, the whole is diſſolved; whereas the volatile ſpirit, here employed, extracts but a very ſmall portion of it.

MERCURIUS EMETICUS FLAVUS.

The yellow mercurial emetic.

Lond.

Upon purified quickſilver, contained in a glaſs veſſel, pour double its weight of the ſtrong ſpirit, or oil of vitriol. Heat the liquor by degrees, ſo as at length to make it boil, till a white maſs remain, which is to be thoroughly dried with a ſtrong fire. This maſs, on the affuſion of warm water, grows yellowiſh, and falls into powder, which is to be diligently ground with the water, in a glaſs mortar. Then ſuffer it to ſettle, pour off the water, and waſh the powder in ſeveral parcels of freſh water, until it be ſufficiently dulcified.

MECURIUS PRÆCIPITATUS FLAVUS,
ſeu
TURPETHUM MINERALE.
Yellow precipitate of mercury, or turpeth mineral.
Edinb.

Take four ounces of pure quickſilver, and eight ounces of oil of vitriol. Cautiouſly mix them together, and diſtil in a retort, placed in a ſand-furnace, to dryneſs; the white calx, which is left at the bottom, being ground to powder, and thrown into warm water, immediately grows of a yellow colour. Waſh this in freſh waters renewed ſeveral times, until it has loſt all its acrimony: then dry it for uſe.

The quantity of oil of vitriol, formerly directed, was double to that in the above preſcriptions. The reduction now made in this article, greatly facilitates the proceſs: and even leſs than the preſent quantity would ſuffice.

Boerhaave directs this preparation to be made in an open glaſs, ſlowly heated, and then placed immediately upon burning coals; care being taken to avoid the fumes, which are extremely noxious. This method will ſucceed very well, with a little addreſs, when the ingredients are in ſmall quantity: but where the mixture is large, it is better to uſe a retort, placed in a ſand-furnace, with a recipient, containing a ſmall quantity of water, luted to it. Great care ſhould be taken, when the oil of vitriol begins to bubble, to ſteadily keep up the heat, without at all increaſing it, till the ebullition ceaſes, when the fire ſhould be augmented to the utmoſt degree, that as much as poſſible of the redundant acid may be expelled.

If the matter be but barely exſiccated, it proves a cauſtic ſalt, which in the ablution with water will almoſt all diſſolve, leaving only a little quantity of turpeth: the more of the acid has been diſſipated, the leſs of the remaining mercury will diſſolve, and conſequently the yield of turpeth will be the greater; fire expelling only the acid (viz. ſuch part of the acid as is not completely ſatiated with mercury) while water takes up always, along with the acid, a proportionable quantity of the mercury itſelf. Even when the matter has been ſtrongly calcined, a part will ſtill be ſoluble: this evidently appears upon pouring into the waſhings a little ſolution of fixt alkaline ſalt, which will throw down a conſiderable quantity of yellow precipitate, greatly reſembling the turpeth, except that it is leſs violent in operation.

From this experiment, it appears, that the beſt method of edulcorating this powder is, by impregnating the water, intended to be uſed in its ablution, with a determined proportion of fixt alkaline ſalt: for by theſe means, the waſhed turpeth will not only turn out greater in quantity, but, what is of more conſequence, always have an equal degree of ſtrength; a circumſtance which deſerves particularly to be conſidered, eſpecially in making ſuch preparations as, from an error in the proceſs, may prove too violently corroſive to be uſed with any tolerable degree of ſafety.

It is obſervable, that though the

ſuperfluous acid is here abſorbed from the mercury by the alkaline ſalt; yet in ſome circumſtances this acid forſakes that ſalt to unite with mercury. If *tartarum vitriolatum*, or *nitrum vitriolatum* (i. e. a combination of vitriolic acid with fixt alkali) be diſſolved in water, and the ſolution added to a ſolution of mercury in aquafortis; the vitriolic acid will unite with the mercury, and form with it a turpeth, which falls to the bottom; leaving only the alkali diſſolved in the aquafortis, and united with the acid thereof into a regenerated nitre. On this principle depends the preparation deſcribed by Wilſon, under the title of *An excellent precipitate of mercury*; which is no other than a true turpeth, though not generally known to be ſuch. It is made by diſſolving four ounces of nitrum vitriolatum in ſixteen ounces of ſpirit of nitre; diſſolving in this compound liquor four ounces of mercury: abſtracting the menſtruum in a ſand-heat; and edulcorating with water the gold-coloured maſs which remains.

Turpeth mineral is a ſtrong emetic, and in this intention operates the moſt powerfully of all the mercurials that can be ſafely given internally. Its action however is not confined to the primæ viæ; it will ſometimes excite a ptyaliſm, if a purgative be not taken ſoon after it. This medicine is uſed chiefly in virulent gonorrhœas, and other venereal caſes, where there is a great flux of humours to the parts: it is ſaid likewiſe to have been employed with good ſucceſs, in robuſt conſtitutions, againſt leprous diſorders, and obſtinate glandular obſtructions: the doſe is from two grains to ſix or eight. It may be given in doſes of a grain or two as an alterative and diaphoretic, after the ſame manner as the *mercurius calcinatus* already ſpoken of.

This medicine has been of late recommended as the moſt effectual preſervative againſt the hydrophobia. There are ſeveral examples of its preventing madneſs in dogs that had been bitten; and ſome, of its performing a cure after the madneſs was begun. From ſix or ſeven grains to a ſcruple may be given every day, or every other day, for a little time, and repeated at the two or three ſucceeding fulls and changes of the moon. Some few trials have likewiſe been made on human ſubjects, bitten by mad dogs; and in theſe alſo the turpeth, uſed either as an emetic or alterative, ſeemed to have good effects. See James's treatiſe on canine madneſs.

The waſhings of turpeth mineral are uſed by ſome externally, for the itch and other cutaneous foulneſſes. In ſome caſes mercurial lotions may be proper, but they are always to be uſed with great caution. This is by no means an eligible one, as being extremely unequal in point of ſtrength; more or leſs of the mercury being diſſolved, as obſerved above, according to the degree of calcination. The pharmacopœia of Paris directs a mercurial waſh free from this inconvenience, under the title of *Aqua mercurialis*, or *Mercurius liquidus*. It is compoſed of one ounce of mercury, diſſolved in a ſufficient quantity of ſpirit of nitre, and diluted with thirty ounces of diſtilled water. In want of diſtilled water, rain water may be uſed; but of ſpring waters there are very few which will mix with the mercurial ſolution, without growing turbid and precipitating a part of the mercury.

SECT. VIII.

Preparations of Antimony.

ANTIMONY is compoſed of a metal, united with ſulphur or common brimſtone.

If powdered antimony be expoſed to a gentle fire, the ſulphur exhales; the metallic part remaining in form of a white calx, reducible, by proper fluxes, into a whitiſh brittle metal, called *regulus*. This is readily diſtinguiſhed from the other bodies of that claſs, by its not being ſoluble in aqua fortis. Its proper menſtruum is aqua regis.

If aqua regia be poured upon crude antimony, the metallic part will be diſſolved; and the ſulphur thrown out, partly to the ſides of the veſſel, and partly to the ſurface of the liquor, in form of a greyiſh yellow ſubſtance. This, ſeparated and purified by ſublimation, appears on all trials the ſame with pure common brimſtone.

The metal, freed from the ſulphur naturally blended with it, and afterwards fuſed with common brimſtone, reſumes the appearance and qualities of crude antimony.

THE antimonial metal is a medicine of the greateſt power of any known ſubſtance. A quantity too minute to be ſenſible on the tendereſt balance, is capable of producing virulent effects, if taken diſſolved or in a ſoluble ſtate. If given in ſuch a form as to be immediately miſcible with the animal fluids, it proves violently emetic; if ſo managed as to be more ſlowly acted on, cathartic; and in either caſe, if the doſe be extremely ſmall, diaphoretic. Thus, though vegetable acids extract ſo little from this metal, that the remainder ſeems to have loſt nothing of its weight, the tinctures prove, in no large doſes, ſtrongly emetic, and in ſmaller ones powerfully diaphoretic. The regulus has been caſt into the form of pills, which acted as virulent cathartics, though without ſuffering any ſenſible diminution of weight in their paſſage through the body; and this repeatedly, for a great number of times.

This metal, diveſted of the inflammable principle which it has in common with other metallic bodies, that are reduced to a calx, becomes indiſſoluble and inactive. The calx neverthel eſs, urged with a ſtrong fire, melts into a glaſs, as eaſy of ſolution (partially) and as virulent in operation, as the regulus itſelf. The glaſs, thoroughly mingled with ſuch ſubſtances as prevent its ſolubility, as wax, reſins, and the like, is again rendered mild.

Vegetable acids, as already obſerved, diſſolve but an extremely minute portion of this metal. The ſolution nevertheleſs proves powerfully emetic and cathartic. The nitrous and vitriolic acids only corrode it into a powder, to which they adhere ſo ſlightly as to be ſeparable in good meaſure by water, and totally by fire, leaving the regulus in form of a calx ſimilar to that prepared by fire alone. The marine acid has a very different effect.

This reduces the regulus into a violent corroſive, and though it difficultly unites, yet very cloſely adheres to it, inſomuch as not to be ſeparable by any ablution, nor by fire, the regulus ariſing along with it. The nitrous or vitriolic acids expel the marine, and thus reduce the corroſive into a calx ſimilar to the foregoing.

Sulphur remarkably abates the power of this metal: and hence crude antimony (in which the regulus appears to be combined with from one fourth to one half its weight of ſulphur) proves altogether mild. If a part of the ſulphur be taken away, by ſuch operations as do not deſtroy or calcine the metal, the remaining maſs becomes proportionably more active.

The ſulphur of antimony may be expelled by deflagration with nitre. The larger the quantity of nitre, to a certain point, the more of the ſulphur will be diſſipated, and the preparation will be the more active. If the quantity of nitre be more than ſufficient to conſume the ſulphur, the reſt of it, deflagrating with the inflammable principle of the regulus itſelf, renders it again mild.

The ſulphur of antimony is likewiſe abſorbed, in fuſion, by certain metals, and by alkaline ſalts. Theſe laſt, when united with ſulphur, prove a menſtruum for all the metals (zinc excepted), and hence, if the fuſion be long continued, the regulus is taken up, and rendered ſoluble in water.

CROCUS ANTIMONII MEDICINALIS.

Medicinal crocus of antimony.

Take of
  Antimony, eight parts;
  Nitre, one part.
Mix, and throw them, by little at a time, into a red-hot crucible: when the deflagration ceaſes, take the crucible out of the fire, and reduce the matter into powder.

This preparation is ſufficiently mild, though conſiderably more active than the crude mineral: eighteen or twenty grains will in ſome conſtitutions operate, though very gently, both upwards and downwards. It appears to be nearly ſimilar to the *medicinal regulus* hereafter deſcribed.

In this and the following proceſſes with nitre, the operator muſt obſerve to throw into the crucible only a little of the matter at a time, and to wait till the deflagration of one parcel is over before another is added; for if much were put in at once, the deflagration would be ſo violent, that great part of the matter would be thrown over the crucible. The powder is moſt conveniently introduced by means of a ſmall iron ladle. Care muſt be taken not to bring back with the ladle any ſpark of coal, which would ſet fire to the reſt of the mixture.

CROCUS ANTIMONII MITIOR.

The milder crocus of antimony.

Take of
  Antimony, two parts;
  Nitre, one part.
Mix them together, and throw the powder by degrees into a red-hot crucible. As ſoon as the deflagration ceaſes, remove the matter from the fire (without ſuffering it to melt) and reduce it into powder.

This preparation is called *mitior*, not in regard to the crocus above deſcribed, but to that which follows. It acts much more powerfully than the foregoing; the increaſe of the nitre occaſioning a greater quantity of the ſulphur of the antimony to be diſſipated. The London committee received it in their firſt draught, with the character of an antimonial of mild operation, which had proved a ſucceſsful medicine in numerous inſtances, without any one example of its being unſafe. Some trials however, afterwards reported to them, where the operation of this and the following crocus were compared, induced them to lay this preparation aſide. It appears to differ from the other only in being leſs violent.

CROCUS ANTIMONII.

Crocus of antimony, commonly called Crocus metallorum, and by foreign writers, Hepar antimonii, or Liver of antimony.

Lond.

Take
Antimony,
Nitre, of each equal weights.

Reduce them ſeparately into powder; then mix, and inject them into a crucible heated to a white heat, that the mixture (after deflagration) may melt. Then pour it out, ſeparate the ſcoriæ, and reſerve the matter underneath them for uſe. It proves different in colour, according to the continuance of the heat; the longer it has been kept in fuſion, the yellower it will be.

Edinb.

The mixture of antimony and nitre, made as above, is to be injected into a red-hot crucible. When the detonation is over, ſeparate the reddiſh metallic matter from the whitiſh cruſt, and edulcorate it by repeated waſhings with hot water.

HERE the antimonial ſulphur is almoſt totally conſumed, and the metallic part left diveſted of its corrector. Theſe preparations, given from two to ſix grains, act as violent emetics, greatly diſordering the conſtitution. Their principal uſe is in maniacal caſes; as the baſis of ſome other preparations: and among the farriers, who frequently give to horſes an ounce or two a day, divided into different doſes, as an alterative. In theſe and other quadrupeds, this medicine acts chiefly as a diaphoretic.

The chemiſts have been accuſtomed to make the crocus with a leſs proportion of nitre than directed above; and without any further melting, than what enſues from the heat that the matter acquires by deflagration, which, when the quantity is large, is very conſiderable. A little common ſalt is added to promote the fuſion. The mixture is put by degrees into an iron pot, or mortar, ſomewhat heated, and placed under a chimney. When the firſt ladleful is in, a piece of lighted charcoal is thrown to it, which ſets the matter on fire. The reſt of the mixture is then added by little and little: the deflagration is ſoon over, and the whole appears in perfect fuſion. When cold, a conſiderable quantity of ſcoriæ are found upon the ſurface; which ſcoriæ are eaſily knocked off with a hammer. The crocus, prepared after this manner, is of a redder colour, than that of the firſt of the above proceſſes.

CROCUS ANTIMONII LOTUS.

Waſhed crocus of antimony.

Lond.

Reduce the crocus into a very ſubtile powder, and boil it in water. Then, throwing away this water, waſh the powder ſeveral times in freſh warm water, until it becomes perfectly inſipid.

This proceſs is deſigned chiefly to fit the crocus for the preparation of emetic tartar, of which hereafter, and of the antimonial emetic wine. If the crocus were employed for thoſe purpoſes without waſhing, the alkaline ſalt, with which it is in ſome degree impregnated from the deflagration of the nitre, would in part ſatiate the acids of the tartar and of the wine, and thus, impeding their action on the metallic part of the antimony, render the medicines very precarious in ſtrength. That uncertainties of this kind may be the more effectually guarded againſt, the glaſs, or rather the pure regulus of antimony, is by ſome preferred to the crocus, both for the emetic tartar and wine. The Edinburgh college, as appears in the foregoing proceſs, does not allow the crocus to be kept in its unwaſhed ſtate; making the ablution a part of the preparation of it.

EMETICUM MITE ANTIMONII.

A mild antimonial emetic.

Take of
Antimony, one part;
Nitre, two parts.

Grind them together, and throw them by little and little into a red-hot crucible. When the deflagration is over, the remaining matter, which proves white, is to be waſhed for uſe.

The quantity of nitre is here ſo large, as to conſume not only the ſulphur of the antimony, but likewiſe great part of the inflammable principle of the regulus. Boerhaave, from whom this preparation is taken, informs us, that it is ſo mild, as often to occaſion only ſome light nauſea and gentle vomiting, with a large diſcharge of ſaliva, and thick urine. Its effects ſeem to be nearly the ſame with thoſe of the *regulus medicinalis* and *crocus medicinalis.*

CALX ANTIMONII.

Calx of antimony, commonly called Diaphoretic antimony.

Lond.

Take of
Antimony, one part;
Nitre, three parts.

Let the powdered antimony be well mixed with the nitre, and gradually injected into a crucible, heated to a light white heat. The matter being afterwards taken from the fire, is to be waſhed with water, both from the ſalt which adheres to it, and from the groſſer part that is leſs perfectly calcined.

Edinb.

Take of
Antimony, calcined as for making the glaſs,
Nitre, of each equal parts.

Mix them together, and put them into a crucible; keep it in a red heat for an hour; afterwards powder it, and waſh it often in hot water till it becomes inſipid.—This powder, unwaſhed, is called

ANTIMONIUM DIAPHORETICUM NITRATUM.

Nitrated diaphoretic antimony.

When the powder is waſhed with freſh quantities of water, till the water comes off inſipid, it is called

ANTIMONIUM DIAPHORETICUM LOTUM.

Waſhed diaphoretic antimony.

The ſeveral waſhings, mixed together, filtered, and evaporated over a gentle fire till a cuticle forms on the ſurface, yield, in the cold, cryſtals, called

NITRUM STIBIATUM.

Antimoniated nitre.

The calx of antimony, when freed by waſhing from the ſaline matter, is extremely mild, if not altogether inactive. Hoffman, Lemery, and others, aſſure us, that they have never experienced from it any ſuch effects as its uſual title (that under which it ſtands in the laſt of theſe proceſſes) imports. Boerhaave declares, that it is a mere metallic earth, entirely deſtitute of all medicinal virtue; and the committee of the London college admit that it has no ſenſible operation. The common doſe is from five grains to a ſcruple, or half a dram; though Wilſon relates, that he has known it given by half ounces, and repeated two or three times a day, for ſeveral days together.

Some report, that this calx, by being kept for a length of time, contracts an emetic quality. Whence it has been concluded, that the powers of the reguline part are not entirely deſtroyed; that the preparation has the virtues of other antimonials which are given as alteratives, that is, in ſuch ſmall doſes as not to ſtimulate the primæ viæ; and that, therefore, diaphoretic antimony, as it is certainly among the mildeſt preparations of that mineral, may be uſed for children, and ſuch delicate conſtitutions where the ſtomach and inteſtines are eaſily affected. The obſervation, however, from which theſe concluſions are drawn, does not appear to be well founded. Ludovici relates, that after keeping the powder for four years, it proved as mild as at firſt: and the Straſburgh pharmacopœia, with good reaſon, ſuſpects, that where the calx has proved emetic, it had either been given in ſuch caſes as would of themſelves have been attended with this ſymptom (for the great alexipharmac virtues, attributed to it, have occaſioned it to be exhibited even in the more dangerous malignant fevers, and other diſorders, which are frequently accompanied with vomiting), or that it had not been ſufficiently calcined, or perfectly freed from ſuch part of the regulus as might remain uncalcined. The uncalcined part being groſſer than the true calx, the ſeparation is effected by waſhing over with water, in the ſame manner as is already directed for ſeparating earthy powders from their groſſer parts.

It has been obſerved, that when diaphoretic antimony is prepared with nitre abounding with ſea ſalt, of which all the common nitre contains ſome portion, the medicine has proved violently emetic. This effect is not owing to any particular quality of the ſea ſalt, but to its quantity, by which the proportion of the nitre to the antimony is rendered leſs.

The *nitrum ſtibiatum* is produced by the deflagration of the ſulphur of the antimony with the nitre, in the ſame manner as the *ſal polychreſt*, from which it differs no otherwiſe than in retaining ſome portion of the antimonial calx.

CERUSSA ANTIMONII.

Ceruſſe of antimony.

Take of
  Regulus of antimony, one part;
  Nitre, three parts.
Deflagrate them together, as in the foregoing proceſs.

THE reſults of both proceſſes appear to be altogether the ſame. It is not neceſſary to uſe ſo much nitre here, as when antimony itſelf is employed; for the ſulphur which the crude mineral contains, and which requires for its diſſipation nearly an equal weight of nitre to the antimony, is here already ſeparated. Two parts of nitre to one of the regulus are ſufficient.

It is better however to have an over proportion of nitre than an under one, leſt ſome parts of the regulus ſhould eſcape being ſufficiently calcined.

It may be proper to obſerve, that though crude antimony and the regulus yield the ſame calces, yet the ſalts ſeparated in waſhing the calces are very different. As crude antimony contains common ſulphur, the acid of the ſulphur unites with the alkaline baſes of the nitre, and the reſult is a neutral ſalt. As the regulus contains the phlogiſtic or inflammable principle, but no ſulphur, the nitre is alkalized as it would be by charcoal or ſimilar inflammable bodies, and is at the ſame time rendered more acrimonious than the common alkaline ſalts. If only equal parts of the regulus and nitre be employed, and the fire kept up ſtrong for an hour or more, the ſalt will prove more cauſtic than even the potential cautery of the ſhops. But the cauſticity of the ſalt will ſtill be far greater, if, inſtead of the ſimple regulus of antimony, the martial regulus be uſed.

REGULUS ANTIMONII MEDICINALIS.

Medicinal regulus of antimony.

Edinb.

Take of
 Antimony, five ounces;
 Sea ſalt, four ounces;
 Salt of tartar, one ounce.

Grind them into powder, and throw the mixture, by little at a time, into a red-hot crucible; occaſionally breaking, with an iron rod, the cruſt that forms on the ſurface. When the fuſion is completed, pour out the matter into a heated cone, gently ſhaking it now and then, or ſtriking it on the ſides, that the regulus may ſettle to the bottom. When grown cold, beat off the ſcoriæ, and grind the regulus into a powder, which is to be kept in a cloſe-ſtopt vial.

This medicine is nearly ſimilar in quality to one made with one-eighth of nitre, already deſcribed: in both proceſſes, the antimony is freed from a ſmall portion of its ſulphur, which is diſſipated in flame by the nitre, and abſorbed by the alkaline ſalt. This preparation is greatly celebrated by Hoffman, and other German phyſicians, in ſundry obſtinate chronical diſorders, and eſteemed one of the beſt antimonials that can be given with ſafety as alterants. It operates chiefly as a diaphoretic, and ſometimes, though rarely, proves emetic. The doſe is from three or four grains to twenty.

This regulus, reduced to a ſubtile powder, is the genuine FEBRIFUGE POWDER of Craanius (*Pharm. Boruſſo-Brandenburg*, edit. 1734. page 107.) and has been greatly commended in all kinds of fevers, both of the intermittent and continual kind (*Pharm. Argent.* 1725. page 252.) It is ſaid that a doſe or two has frequently removed theſe diſorders, by occaſioning either a ſalutary diaphoreſis, or acting mildly by ſtool or vomit. The colour of the levigated powder is a purpliſh brown. The antimonial emetic of Boerhaave, already mentioned, which is white, is nearly ſimilar to it in its medicinal effects.

The common ſalt ſeems to be of no further uſe in the proceſs, than as it ſerves to promote the fuſion; and even for this it is not neceſſary. The medicine is ſaid to be rather more mild and certain in operation, if prepared without it.

Regulus antimonii.
Regulus of antimony.

Take of
Antimony,
Nitre,
Crude tartar, of each equal parts.

Grind them ſeparately into a powder, then mix, and rub them all together. Throw the powder, at ſeveral times, into a red-hot crucible, taking care to break the cruſt, which forms on the ſurface, with an iron rod: when the detonation is over, let a ſtrong fire be made, that the matter may flow like water; then pour it out into a warm greaſed cone, which is to be gently ſtruck on the ſides, that the regulus may ſeparate and fall to the bottom. When grown cold, let the regulus be cleared from the ſcoriæ that lie a-top of it.

In this proceſs (which is taken from the edition of the Edinburgh pharmacopœia publiſhed in the year 1744), an alkaline ſalt is produced from the nitre and tartar, in ſuch quantity as entirely to abſorb the ſulphur of the antimony: the alkali, thus ſulphurated, will take up more or leſs of the reguline part, according to its quantity, and the continuance of the fuſion.

As the ingredients are above proportioned, the yield of regulus proves extremely ſmall, and if the fuſion be long continued, ſcarce perceptible; almoſt the whole of it being taken up into the ſcoriæ. In order to obtain the largeſt quantity, the nitre ought to be diminiſhed one half. It is convenient to rub the nitre and tartar together, and deflagrate them in an iron ladle or pan, before their mixture with the antimony; for by theſe means, the loſs of ſome part of the antimony, which otherwiſe happens from the vehemence of the deflagration, will be prevented, a ſmaller crucible will ſerve, and leſs time and labour complete the proceſs.

The mixture of nitre and tartar deflagrated together, will reduce any of the antimonial calces (as the diaphoretic antimony, ceruſſe, or antimony calcined by itſelf) into regulus; the oily matter of the tartar ſupplying the inflammable principle, which all calces require for their revival into a metallic form; and the alkaline ſalt promoting their fuſion. It is the common reducing flux of the chemiſts; by whom it is called, from its colour, the *black flux*. The largeſt yield of regulus, hitherto obtained from antimony, has been got by calcining it without addition, as directed hereafter for making glaſs of antimony, and reviving the calx by fuſion, with this, or ſimilar compoſitions. Mr. Geoffroy, who firſt communicated this method to the French academy, ſeems to look upon ſoap (the ſubſtance he happened to make uſe of himſelf) as the only one that will ſucceed; but the effects of this are not different from thoſe of the foregoing flux. Both conſiſt of an alkaline ſalt, and an inflammable (not ſulphureous) ſubſtance, which are the only materials here neceſſary. Upon the whole, the moſt advantageous proceſs for obtaining this regulus, appears to be the following.

Let powdered antimony be calcined or roaſted over a gentle fire, as directed hereafter for making the glaſs. Mix the calx with about equal its weight of ſome reducing flux, ſuch as the black flux above mentioned. Melt the mixture in a crucible, with a quick fire, and when in thin fuſion pour it into a cone heated over a ſmoaky flame. The pure regulus will fall to the bottom, the ſcoriæ floating on the top.

REGULUS ANTIMONII MARTIALIS.

Martial regulus of antimony.

Take of
 Antimony,
 Nitre,
 Crude tartar, of each one pound;
 Small pieces of iron, half a pound.

Heat the iron in a crucible to a white heat; then gradually add the other ingredients, firſt powdered and mixed together, and proceed in the ſame manner as in the foregoing proceſs.

THE nitre might here be diminiſhed to one-fourth of its weight, and the tartar to half that quantity. The pieces of iron may be ſmall nails; the filings of the metal, lying cloſer together, are not ſo readily acted upon by the antimony.

REGULUS ANTIMONII STELLATUS.

Stellated regulus of antimony.

This is made by melting the martial regulus ſeveral times with freſh nitre and tartar.

THE ſimple regulus of antimony is more readily made to exhibit a ſtarry appearance on its ſurface, than the martial; which it will alſo do by one, as well as by any number of fuſions. The phænomenon entirely depends upon the regulus's being pure, brought into extreme thin fuſion, and cooled ſlowly in the cone, without ſhaking or moving it. If the martial regulus be employed, it is convenient to add ſome freſh antimony (about one-fourth the weight of the regulus) to abſorb ſuch part of the iron as may be retained in it; when the whole is in perfect fuſion, inject, at times, about one-eighth of nitre, or fixt alkaline ſalt, previouſly dried, and made very hot.

The three foregoing *reguli* are at preſent rarely, if ever, made uſe of in medicine; the emetic cups, and perpetual pills, formerly made from them, have long been laid aſide as precarious and unſafe. Hence the Edinburgh college, which retained them all in the edition of their pharmacopœia publiſhed in 1744, have at a late reviſal rejected them. It ſhould ſeem, however, that the pure regulus, though greatly too virulent to be taken by itſelf, might be employed to advantage for the making of ſome other preparations, particularly the antimonial wine and emetic tartar. For the uncertainty in ſtrength, which has often been complained of in thoſe medicines, appears to proceed chiefly from ſaline or ſulphureous matter in the antimonial preparation made uſe of for communicating the impregnation to the wine or tartar; and (except the calces, which are diveſted of the proper antimonial virtues) the regulus is the only form in which we can expect to have the metallic part of the antimony free from ſuch admixtures, the only antimonial preparation on which we can depend for being always equal in its own degree of power.

The ſcoriæ produced in the foregoing proceſſes, afford medicines leſs violent than the regulus itſelf, ſome of which are in conſiderable eſteem. Theſe ſcoriæ conſiſt of the ſulphur of the antimony united with an alkaline ſalt, and a part of the regulus taken up by this compound,

pound, and rendered ſoluble in water.

SULPHUR AURATUM ANTIMONII.

Golden ſulphur of antimony.

Let the ſcoriæ of regulus of antimony be reduced into powder, whilſt warm, and then boiled for a conſiderable time in thrice their quantity of water. Filter the yellowiſh red ſolution, and drop into it a proper quantity of ſpirit of vitriol. A powder will precipitate, which is to be waſhed with water, till perfectly edulcorated and freed from its ill ſmell.

SULPHUR ANTIMONII PRÆCIPITATUM.

Precipitated ſulphur of antimony. *Lond.*

Take of
Antimony, ſixteen ounces;
Tartar, a pound;
Nitre, half a pound.

Let theſe be reduced ſeparately into powder, then mixed, thrown by degrees into a red-hot crucible, and melted with a ſtrong fire. Pour out the matter into a conical mould; the metallic part, commonly called regulus of antimony, will ſink to the bottom, the ſcoriæ ſwimming above it. Diſſolve theſe ſcoriæ in water, filter the ſolution through paper, and precipitate the ſulphur by dropping in ſome ſpirit of ſea ſalt: laſtly, waſh the ſulphur from the ſalts, and dry it for uſe.

SULPHUR AURATUM ANTIMONII.

Golden ſulphur of antimony. *Edinb.*

Boil, in an iron pot, four pounds of ſoap leys diluted with three pounds of water, and throw in by degrees two pounds of powdered antimony; keeping them continually ſtirring, with an iron ſpatula, for three hours, over a gentle fire; and occaſionally ſupplying more water. The liquor, loaded with the ſulphur of antimony, being then ſtrained through a woollen cloth, drop into it gradually, whilſt it continues hot, ſo much ſpirit of nitre diluted with an equal quantity of water, as ſhall be ſufficient to precipitate the ſulphur, which is afterwards to be carefully waſhed with hot water. If the liquor remaining after the precipitation be purified by filtration, evaporated till a pellicle forms on the ſurface, and then ſet to ſhoot, it will yield cryſtals of antimoniated nitre (the ſame with that obtained from the waſhings of diaphoretic antimony).

The foregoing preparations are not ſtrictly ſulphurs. They contain a conſiderable quantity of the metallic part of the antimony, which is reducible from them by proper fluxes. That made by the firſt of the above proceſſes contains greateſt part of the metal; for, as we have already ſeen, very little, ſometimes ſcarce any at all, ſeparates in the fuſion. The quantity of regulus taken up in the ſecond alſo will be different, according to the degree of fire employed, and the length of time that the fuſion is continued. Theſe medicines, therefore, muſt needs be liable to great variation in point of ſtrength, and in this reſpect they are, perhaps, the moſt precarious, though ſome have affirmed that they are the moſt certain, of the antimonial medicines.

The foregoing preparations prove emetic when taken on an empty ſtomach, in a doſe of four, five, or ſix grains; but in the preſent practice, they are ſcarce ever preſcribed in this intention; being chiefly uſed as alterative deobſtruents, particularly in cutaneous diſorders. Their emetic quality is eaſily blunted, by making them up into pills with reſins or extracts, and giving them on a full ſtomach. With theſe cautions, they have been increaſed to the rate of ſixteen grains a day, and continued for a conſiderable time, without occaſioning any diſturbance upwards or downwards. As their ſtrength is precarious, they ſhould be taken at firſt in very ſmall doſes, and increaſed by degrees according to their effect.

A compoſition of the ſulphur auratum, with mercurius dulcis, has been found a powerful, yet ſafe, alterative in cutaneous diſorders; and has completed a cure after ſalivation had failed. In venereal caſes, likewiſe, this medicine has produced excellent effects. A mixture of equal parts of the ſulphur and calomel (well triturated together, and made into pills with extracts, &c.) may be taken from four to eight or ten grains, morning and night; the patient keeping moderately warm, and drinking after each doſe, a draught of a decoction of the woods, or ſimilar liquors. This medicine generally promotes perſpiration, ſcarce occaſioning any tendency to vomit or purge, or affecting the mouth. See the *Edinburgh eſſays*, vol. i. and the *Acta natur. curioſ.* vol. v.

KERMES MINERALIS.

Kermes mineral.

Take of
- Antimony, ſixteen ounces;
- Any fixt alkaline ſalt, four ounces;
- Water, one pint.

Boil them together for two hours, then filter the warm liquor. As it cools, the kermes will precipitate. Pour off the water, and add to it three ounces of freſh alkaline ſalt, and a pint more of water: in this liquor boil the remaining antimony as before; and repeat the proceſs a third time, with the addition of only two ounces of alkaline ſalt, and another pint of water; filtering the liquor as at firſt, and collecting the powders which ſubſide from them in cooling.

This medicine has of late been greatly eſteemed in ſome places, under the names of *Kermes mineral, pulvis Carthuſianus, poudre des Chartreaux*, &c. It was originally a preparation of Glauber, and for ſome time kept a great ſecret; till at length the French king purchaſed the preparation from M. de la Ligerie, for a conſiderable ſum, and communicated it to the public in the year 1720. In virtue, it is not different from the ſulphurs above-mentioned. All of them owe their efficacy to a part of the regulus of the antimony, which the alkaline ſalt, by the mediation of the ſulphur, renders ſoluble in water.

PANACEA ANTIMONII.

Panacea of antimony.

Take of
- Antimony, ſix ounces;
- Nitre, two ounces;
- Common ſalt, an ounce and a half;
- Charcoal, an ounce.

Reduce them into a fine powder, and put the mixture into a red-hot crucible, by half a ſpoonful at a time, continuing the fire a quarter of an hour after the laſt injection. Then either pour the matter into a cone, or let it cool in the crucible, which when cold muſt be broken to get it out. In the bottom will be found a quantity of regulus; above this a compact liver-coloured ſubſtance; and on the top, a more ſpongy maſs: this laſt is to be reduced into powder, edulcorated with water, and dried, when it appears of a fine golden colour.

THIS preparation is ſuppoſed to have been the baſis of LOCKYER's PILLS, which were formerly a celebrated purge. Ten grains of the powder mixed with an ounce of white ſugar-candy, and made up into a maſs with mucilage of gum tragacanth, may be divided into an hundred ſmall pills; of which one, two, or three, taken at a time, are ſaid to work gently by ſtool and vomit. The compact liver-coloured ſubſtance, which lies immediately above the regulus, operates more churliſhly. This laſt appears to be nearly of the ſame nature with the *crocus antimonii*, and the former with the *ſulphur auratum*.

VITRUM ANTIMONII.

Glaſs of antimony.

Edinb.

Take of

Antimony, reduced to powder, one pound.

Calcine it over a gentle fire, in an unglazed earthen veſſel, keeping it continually ſtirring with an iron ſpatula, until the fumes ceaſe, and the antimony be reduced into a grey powder. Melt this powder in a crucible, with an intenſe fire, and pour out the liquid matter into a heated braſs diſh.

THE calcination of antimony, to fit it for making a tranſparent glaſs, ſucceeds very ſlowly, unleſs the operator be very wary and circumſpect in the management of it. The moſt convenient veſſel is a broad ſhallow diſh, or a ſmooth flat tile, placed under a chimney. The antimony ſhould be the purer ſort, ſuch as is uſually found at the apex of the cones. This, groſsly powdered, is to be evenly ſpread over the bottom of the pan, ſo as not to lie above a quarter of an inch thick on any part. The fire ſhould be at firſt no greater than is juſt ſufficient to raiſe a fume from the antimony, which is to be now and then ſtirred: when the fumes begin to decay, increaſe the heat, taking care not to raiſe it ſo high as to melt the antimony, or run the powder into lumps; after ſome time the veſſel may be made red-hot, and kept in this ſtate, until the matter will not, upon being ſtirred, any longer fume. If this part of the proceſs be duly conducted, the antimony will appear in an uniform powder, without any lumps, and of a grey colour.

With this powder, fill two-thirds of a crucible, which is to be covered with a tile, and placed in a wind-furnace. Gradually increaſe the fire, till the calx be in perfect fuſion, when it is to be now and then examined by dipping a clean iron wire into it. If the matter, which adheres to the end of the wire, appear ſmooth and equally tranſparent, the vitrification is completed, and the glaſs may be poured out upon a hot ſmooth ſtone, or copper-plate, and ſuffered to cool by ſlow degrees, to prevent its cracking and flying in pieces. It is of a tranſparent yellowiſh red colour.

The glaſs of antimony uſually met with in the ſhops, is ſaid to be prepared with certain additions: which may perhaps render it not ſo fit for the purpoſes here deſigned.

ed. By the method above directed, it may be eaſily made, in the requiſite perfection, without any addition.

As we have ſeen, in a former proceſs, antimony rendered nearly or altogether inactive by calcination; it might be expected that the calx and glaſs of the preſent proceſs would be likewiſe inert. But here the calcination is far leſs perfect than in the other caſe, where the inflammable principle of the regulus is totally burnt out by deflagration with nitre: there the calx is of perfect whiteneſs, and a glaſs made from that calx (with the addition of any ſaline flux, for of itſelf it will not vitrify) has little colour: but here ſo much of the inflammable principle is left, that the calx is grey, and the glaſs of a high colour. The calcined antimony is ſaid by Boerhaave to be violently emetic. Experience has ſhewn that the glaſs is ſo, inſomuch as to be unſafe for internal uſe. It is employed chiefly, in the preſent practice, as being ſubſervient to ſome other preparations, particularly the emetic tartar and antimonial wine; and in combination with wax, and ſome other ſubſtances, by which its power is obtunded.

VITRUM ANTIMONII CERATUM.

Cerated glaſs of antimony. *Edinb.*

Take of
  Yellow wax, a dram
  Glaſs of antimony, reduced into powder, an ounce.

Melt the wax in an iron veſſel, and throw into it the powdered glaſs: keep the mixture over a gentle fire for half an hour, continually ſtirring it; then pour it out upon a paper, and when cold grind it into powder.

The glaſs melts in the wax, with a very ſoft heat. After it has been about twenty minutes on the fire, it begins to change its colour, and in ten more, comes near to that of Scotch ſnuff, which is a mark of its being ſufficiently prepared. The quantity here ſet down, loſes about one dram of its weight in the proceſs.

This medicine has for ſome time been greatly eſteemed in dyſenteries: ſeveral inſtances of its good effects, in theſe caſes, may be ſeen in the fifth volume of the *Edinburgh eſſays*, from which the above remarks on the preparation are taken. The doſe is from two or three grains to twenty, according to the age and ſtrength of the patient. In its operation, it makes ſome perſons ſick and vomit; it purges almoſt every one; though it has ſometimes effected a cure, without occaſioning any evacuation or ſickneſs.

Mr. Geoffroy gives two ſingular preparations of glaſs of antimony, which ſeem to have ſome affinity with this. One is made by digeſting the glaſs, moſt ſubtilely levigated, with a ſolution of maſtich made in ſpirit of wine, for three or four days, now and then ſhaking the mixture; and at laſt evaporating the ſpirit, ſo as to leave the maſtich and glaſs exactly mingled. Glaſs of antimony thus prepared, is ſaid not to prove emetic, but to act merely as a cathartic, and that not of the violent kind. A preparation like this was firſt publiſhed by Hartmann, under the name of *chyliſta.*

The other preparation is made by burning ſpirit of wine upon the glaſs three or four times, the powder being every time exquiſitely rubbed upon a marble. The doſe of this medicine is from ten grains to twenty or thirty. It is ſaid to operate mildly both upwards and downwards, and ſometimes to prove ſudorific.

ANTIMONIUM CATHARTICUM.

The purging antimony of Wilſon.

Take four ounces of glaſs of antimony, finely powdered, and gradually pour thereon twelve ounces of oil of vitriol: diſtil in a ſand-heat; and waſh the powder, which remains in the bottom of the retort, till all its acrimony is loſt: then dry it, and grind it with an equal weight of Glauber's cathartic ſalt, and a double quantity of vitriolated nitre. Let this mixture be kept a quarter of an hour in gentle fuſion in a crucible; and afterwards pulverized, waſhed, and dried for uſe.

Mr. Wilſon, the inventor of this preparation, informs us, that it is the moſt certain antimonial purge he ever met with; that it operates without nauſeating the ſtomach; and that by the uſe of this powder only, he knew three confirmed poxes cured. His doſe is from two grains to ten.

We have already obſerved, that the glaſs of antimony contains a part of the regulus not fully diveſted of its inflammable principle. The vitriolic acid, and neutral ſalts containing this acid, abſorb the inflammable principle from ſundry metallic and other bodies; and on this probably depends the mitigation of the glaſs in the preſent proceſs.

CAUSTICUM ANTIMONIALE.

The antimonial cauſtic,
Lond.

Take of
Crude antimony, one pound;
Corroſive mercury ſublimate, two pounds.

Reduce them ſeparately into powder; then mix, and diſtil them in a wide-necked retort, with a gentle ſand-heat. The matter, which ariſes into the neck of the retort, is to be expoſed to the air, that it may run into a liquor.

BUTYRUM ANTIMONII.

Butter of antimony.
Edinb.

Take of
Crude antimony, one part;
Corroſive mercury ſublimate, two parts.

Grind them firſt ſeparately, then thoroughly mix them together, taking the utmoſt care to avoid the vapours. Put the mixture into a coated glaſs retort (having a ſhort wide neck) ſo as to fill one half of it. The retort being placed in a ſand-furnace, and a receiver adapted to it, give firſt a gentle heat, that only a dewy vapour may ariſe. The fire being then increaſed, an oily liquor will aſcend and congeal in the neck of the retort, appearing like ice, which is to be melted down by a live coal cautiouſly applied. This oily matter is to be rectified, in a glaſs retort, into a pellucid liquor.

These proceſſes are extremely dangerous, inſomuch that even the life of the operator, though tolerably verſed in common pharmacy, may be affected for want of taking due care. Boerhaave relates, that one, who from the title he gives him is not to be ſuppoſed inexpert in chemical operations, or unacquainted with the danger attending this, was ſuffocated for want of proper care to prevent the burſting of the retort. The fumes which ariſe, even upon mixing the antimony with the ſublimate, are highly noxious, and ſometimes iſſue ſo copiouſly and ſuddenly, as very difficultly to be avoided.

The cauſtic or butter, as it is called, appears to be a ſolution of the metallic part of the antimony in the marine acid of the ſublimate; the ſulphur of the antimony, and the mercury of the ſublimate, remain at the bottom of the retort, united into an ethiops. This ſolution does not ſucceed with ſpirit of ſalt in its liquid ſtate, and cannot be effected, unleſs (as in the caſe of making ſublimate) the acid be highly concentrated, and both the ingredients ſtrongly heated. If regulus of antimony were added in the diſtillation of ſpirit of ſea ſalt without water, a like ſolution would be made.

When the congealed matter that riſes into the neck of the retort, is liquefied by the moiſture of the air, it proves leſs corroſive than when melted down and rectified by heat; though it ſeems, in either caſe, to be ſufficiently ſtrong for the purpoſes for which it is intended, as the conſuming of fungous fleſh, and the callous lips of ulcers. It is remarkable, that though this ſaline concrete readily and almoſt entirely diſſolves by the humidity of the air, only a ſmall quantity of white powder ſeparating, it nevertheleſs will not diſſolve on putting water to it directly. Even when previouſly liquefied by the air, the addition of water will precipitate the ſolution.

CINNABARIS ANTIMONII.

Cinnabar of antimony.

Lond.

Let the matter which remains in the retort after the diſtillation of the cauſtic, be ſublimed in a coated matraſs, in an open fire.

Edinb.

As ſoon as red vapours begin to appear in the diſtillation of the butter, change the receiver, without luting the junctures; and increaſe the fire until the retort becomes intenſely red. In an hour or two, the whole of the black powder will be ſublimed, and its colour changed into red. Then break the retort, and diligently ſeparate the cinnabar, which will be found in the neck, from the black droſſy matter.

The cinnabar of antimony is compoſed of the ſulphur of the antimony, and the mercury of the ſublimate, which are perfectly the ſame with the common brimſtone and quickſilver, of which the *cinnabaris factitia* is made. The antimonial cinnabar therefore, whoſe ingredients are laboriouſly extracted from other ſubſtances, is not different from the common cinnabar made with the ſame materials procured at a much cheaper rate. The former indeed is generally of a darker colour than the other, and has ſomewhat of a needled appearance, like that of antimony itſelf; whence it has been ſuppoſed to participate of the metallic part of that mineral. But it appears from experiment, that both the colour and needled form are entirely accidental, and owing to the mixture's containing a larger proportion of ſulphur, and being ſublimed in a more languid manner.

MERCURIUS VITÆ, ſeu PULVIS ALGEROTHI.

Mercury of life, or Algeroth's powder.

Take of

Rectified butter of antimony, as much as you pleaſe.

Pour to it a ſufficient quantity of ſpring water, and an exceeding white powder will be precipitated.

ed. Edulcorate this by repeated affuſions of warm water, and dry it by a ſlow fire.

This powder has not, as its name ſhould ſeem to imply, any thing of mercury in it, but is ſolely compoſed of the reguline part of the antimony, corroded by the acid ſpirit of ſea ſalt; which acid is ſo cloſely united, as not to be ſeparated by any ablution with water. Le Mort directs ſome alkaline ſalt to be diſſolved in the water, in order to obtund the acid. Several other methods alſo have been contrived for correcting and abating the force of this violent emetic; but they either leave it ſtill virulent, or render it inert. It has therefore for a long time been laid aſide by practitioners; and the Edinburgh college, who retained it in a preceding edition, have at a late reviſal of their pharmacopœia expunged it.

Bezoardicum minerale.
Bezoar mineral.

Take any quantity of butter of antimony newly rectified, and gradually drop into it ſpirit of nitre, till the effervescence ceaſes. Draw off the ſpirit in a glaſs veſſel, placed in a ſand-heat, till a dry powder remains behind. Add to this a little freſh ſpirit of nitre, and again exſiccate it. Repeat this a third time: then commit the powder in a crucible to a naked fire, till it has received an almoſt white heat, and detain it in this ſtate for half an hour.

This preparation may be eaſier made, and with greater ſafety to the operator, by dropping the butter of antimony into three or four times its weight in ſpirit of nitre, and diſtilling the mixture in a retort, until a dry white maſs is left behind, which is afterwards to be calcined, as above directed. It may likewiſe be made by diſtilling ſpirit of nitre from the mercurius vitæ, and calcining the remainder; or by deflagrating the mercurius vitæ with thrice its weight of pure nitre. This laſt method, propoſed by Wedelius, is followed by the Auguſtan college.

Bezoar mineral was formerly held in great eſteem as a diaphoretic; but its reputation is at preſent almoſt loſt. It is not different in medical virtue, or in any ſenſible quality, from the calces of antimony made directly by deflagration with nitre, ſome of which have generally ſupplied its place in the ſhops. It appears at firſt extraordinary, that the violent cauſtic, butter of antimony, ſhould be rendered indolent by the corroſive ſpirit of nitre. How this happens will be eaſily underſtood, upon conſidering that the nitrous acid expels the marine (to which the cauſtic quality of the butter is owing) and is itſelf expelled from moſt metallic ſubſtances by fire.

TARTARUM EMETICUM.
Emetic tartar.

Lond.

Take of
  Waſhed crocus of antimony,
  Cryſtals of tartar, each half a pound;
  Water, three pints.
Boil them together for half an hour; then filter the liquor, and, after due evaporation, ſet it by to cryſtallize.

Edinb.

Take of
  Butter of antimony, any quantity.
Infuſe it in hot water, in which has been diſſolved, before-hand, as much fixed alkaline vegetable ſalt

ſalt well purified, as will precipitate all the antimony. Waſh and dry this precipitate, and boil nine drams of it with two ounces and an half of cryſtals of tartar, finely powdered, in five pounds of water, till the powders are diſſolved; ſtrain the ſolution, evaporate to a pellicle, and ſet it to cryſtallize.

It may likewiſe be prepared, in the ſame manner, from the *crocus metallorum* waſhed.

This preparation has been uſually made with the unwaſhed crocus of antimony. By employing, as here directed, the waſhed crocus, it proves of a whiter colour, and likewiſe more certain in ſtrength; though it will ſtill be ſomewhat precarious in this laſt reſpect, if the cryſtallization be complied with: for ſome of the tartar, even though the operation be performed with a good deal of care, will be apt to ſhoot by itſelf, retaining little or nothing of the antimony. It ſhould ſeem therefore more eligible, as ſoon as the ſolution has paſſed the filter, to proceed to the total evaporation of the liquor, or at leaſt to evaporate lower than is uſual for cryſtallization, that the whole may ſhoot at once.

The title of this medicine expreſſes its principal operation. It is one of the beſt of the antimonial emetics, acting more powerfully than the quantity of crocus contained in it would do by itſelf, though it does not ſo much ruffle the conſtitution. And indeed antimonials in general, when thus rendered ſoluble by vegetable acids, are more ſafe and certain in their effects, than the violent preparations of that mineral exhibited by themſelves; the former never varying in their action from a difference in the food taken during their uſe, or ſimilar circumſtances, which occaſioning more or leſs of the others to be diſſolved, make them operate with different degrees of force. Thus crude antimony, where acid food has been liberally taken, has ſometimes proved violently emetic; whilſt, in other circumſtances, it has no ſuch effect.

The doſe of emetic tartar, when deſigned to produce the full effect of an emetic, is from four to ſix or eight grains. It may likewiſe be advantageouſly given in ſmaller doſes, half a grain for inſtance, as a diaphoretic and alterative in cutaneous diſorders; and added, in the quantity of a grain, as a ſtimulus to ipecacuanha, &c.

SECT. IX.

Preparation of Biſmuth.

THIS metal reſembles in appearance the regulus of antimony; but differs greatly from it, in its pharmaceutical properties and medical qualities. It melts in a very ſmall heat, long before ignition; and totally diſſolves, with great effervescence, in aquafortis, which only corrodes the antimonial metal. As a medicine, it ſeems, when pure, to have little or no effect; though ſome preparations of it were formerly accounted diaphoretic. At preſent, only one preparation comes under the notice of the apothecary or chemiſt, and that deſigned for external uſe.

Magisterium bismuthi.

Magiſtery of biſmuth.

Diſſolve biſmuth in a proper quantity of aquafortis, without heat, adding the biſmuth by little and little at a time. Pour the ſolution into ſixteen times its quantity of fair water. It will grow milky, and, on ſtanding for ſome time, depoſit a bright white precipitate: the addition of ſpirit of wine will expedite the precipitation. Waſh the powder in freſh parcels of water; and dry it in a ſhady place betwixt two papers.

This preparation is of ſome eſteem as a coſmetic, which is the only uſe to which it is now applied. The diaphoretic virtues, attributed to it when taken internally, have very little foundation, and by the preſent practice are not at all regarded. It was propoſed to be received in our pharmacopœia at a late reviſal, but was found much too inſignificant to be admitted there.

SECT. X.

Preparations of Zinc.

THIS metal melts in a red heat; and if the air be admitted, flames, and ſublimes into light, white, downy flowers; if the air be excluded, it ariſes, by a ſtrong fire, in its metallic form. Sulphur, which unites with, or ſcorifies all the other metals except gold, does not act on zinc. Acids of every kind diſſolve it.

Zinc, its flowers or calces, and ſolutions, taken internally, prove ſtrong and quick emetics; in ſmall doſes, they are ſaid to be diaphoretic. Externally, they are cooling, aſtringent, and deſiccative.

PURIFICATIO ZINCI.
Purification of zinc.

Melt zinc with a heat no greater than is juſt ſufficient to keep it fluid. Stir it ſtrongly with an iron rod, and throw in alternately pieces of ſulphur and of tallow, the firſt in largeſt quantity. If any conſiſtent matter, or ſcoria, form on the top, take it off, and continue the proceſs, until the ſulphur be found to burn freely and totally away on the ſurface of the fluid zinc.

Zinc uſually contains a portion of lead, which this proceſs effectually ſeparates. Sulphur united with lead forms a maſs, which does not melt in any degree of fire that zinc is capable of ſuſtaining.

FLORES ZINCI.
Flowers of zinc.

Let a large and very deep crucible, or other deep earthen veſſel, be placed in a furnace, in an inclined ſituation, only half upright. Put a ſmall quantity of zinc into the bottom of the veſſel, and apply a moderate fire, no greater than is neceſſary to make the zinc flame. White flowers will ariſe, and adhere about the ſides of the veſſel like wool. When the zinc ceaſes to flame, ſtir it with an iron rod, and continue this operation till the whole be ſublimed.

These flowers ſhould ſeem preferable, for medicinal purpoſes, to tutty, and the more impure ſublimates of zinc, which are obtained in the braſs works; and likewiſe to calamine, the natural ore of this metal, which contains a large quantity of earth, and frequently a portion of heterogeneous metallic matter.

SAL, ſeu VITRIOLUM ZINCI.

Salt, or vitriol of zinc.

Diſſolve purified zinc, by a gentle heat of ſand, in a mixture of one part of oil of vitriol, and four of water. Filter the ſolution, and after due evaporation, ſet it to cryſtallize.

THIS ſalt is an elegant white vitriol. It differs from the common white vitriol, and the *ſal vitrioli* of the ſhops, only in being purer, and perfectly free from any admixture of copper, or ſuch other foreign metallic bodies as the others generally contain.

SECT. XI.

Compound metallic Preparations.

LAPIS MEDICAMENTOSUS.

The medicinal ſtone.

Lond.

TAKE of
Litharge,
Bole armenic, or French bole,
Alum, each half a pound;
Colcothar of green vitriol, three ounces;
Vinegar, a quarter of a pint.

Mix and dry them till they grow hard.

THIS preparation is employed externally as an aſtringent, for faſtening looſe teeth, preſerving the gums, healing and drying up ulcers and wounds, and repreſſing defluxions of thin acrid humours upon the eyes. It is ſometimes uſed in injections for checking a gonorrhæa, after the virulence is expelled. A preparation much reſembling this is ſaid, in the Memoirs of the French academy, to be greatly eſteemed among the ſurgeons in the army as a vulnerary.

SPECIFICUM ADSTRINGENS MAETZII.

An aſtringent preparation taken from Maetz, which has been ſold under the name of

Colbatch's ſtyptic powder.

Take any quantity of iron filings, and as much ſpirit of ſalt as will riſe above them three or four inches. Digeſt them together with a gentle heat, till the ſpirit ceaſe to act on the metal. Then pour off the liquor, evaporate it to one half, and add thereto an equal weight of ſugar of lead. Continue the evaporation, with a ſmall heat, until the matter remain dry, and aſſume a red colour.

If the proceſs be ſtopt as ſoon as it becomes dry, it has exactly the appearance of Colbatch's powder. It muſt be kept cloſe from the air, otherwiſe it deliquiates.

THIS is ſaid to be the ſtyptic, with which ſo much noiſe was made ſome time ago by the author of the *novum lumen chirurgiæ*; and for the ſale of which, a patent was procured: only in that was uſed oil of vitriol, inſtead of the ſpirit of ſalt in this; a difference not very material. The preparation ſtands recommended in all kinds of hæmorrhages and immoderate fluxes, both internally and externally: the doſe is from four grains to twelve.

It is undoubtedly an efficacious ſtyptic, but for internal uſe a dangerous one. See the article LEAD, and its *preparations.*

ANTIHECTICUM POTERII.

Poterius's antihectic.

Take of

Martial regulus of antimony, ſix ounces;

Fine tin, three ounces.

Melt theſe together in a crucible; then pour them out into a warm greaſed mortar, and when the maſs is grown cold, grind it into a powder. Add to this thrice its weight of pure nitre, and deflagrate the mixture in a crucible, throwing in only a ſpoonful at a time; then calcine it [that is, keep it in fuſion] for an hour; and, having afterwards ground it into an impalpable powder, pour on it a ſufficient quantity of warm water. Stir them well together with a peſtle, till the water grows milky, which, thus loaded with the finer parts of the powder, is to be poured off, and freſh water put to the remainder. Repeat this operation till nothing but indiſſoluble feces remain behind. Suffer all the milky liquors to reſt. A powder will fall to the bottom, which is to be waſhed with repeated affuſions of warm water, and laſtly dried for uſe.

THE regulus of antimony ſhould be melted before the tin is added to it; for, if they both be put into the crucible together, a part of the tin will be diſſipated by the heat requiſite for the fuſion of the regulus.

The chemiſts have been greatly divided with regard to the proportion which theſe two ingredients ought to bear to one another. Some vary ſo much from the preſent preſcription, as to order two parts of the antimonial regulus to one of tin; others no more than one part to ſix. Nor have they agreed upon the colour which this preparation ought to have; ſome preferring that which is perfectly white, whilſt others look upon a blueiſh tinge as a mark that the proportions have been duly obſerved, and the operation regularly performed. In the proceſs above, it ſeems intended to be white: for without the obſervance of certain encheireſes, not there mentioned, as particularly calcining the powder after the ablution, it will ſcarce have any thing of a blueiſh caſt.

Practical phyſicians do not differ leſs in the accounts which they give of the virtues of this celebrated medicine. Some extol it as an excellent diaphoretic, &c. others are ready to vouch, that it has done moſt eminent ſervice in hectical caſes; whilſt many, of no ſmall note, are not only confident that it has none of the virtues attributed to it, but utterly condemn it as unſafe, and capable of producing the very diſorders ſaid to be remedied by its uſe. This affair probably will not be ſatisfactorily determined, till the virtues of *calx of tin* and *calx of antimony* (of which this medicine is a mixture) ſhall be better aſcertained than they are at preſent. In the mean time, the uſe of the *antihectic* is in common practice laid aſide; and is not likely to be ever introduced again.

BEZOARDICUM JOVIALE.

Bezoar with tin.

Take of

Regulus of antimony, three ounces;

Pure tin, two ounces;

Corroſive ſublimate mercury, five ounces.

Melt the regulus of antimony in a crucible, and put to it the tin, ſo as to make a new regulus; to which, after being levigated, add the corroſive ſublimate, and diſtil the mixture in a retort. Let the butter which ariſes in this proceſs, be fixed, by three repeated diſtillations, with thrice its own quantity of ſpirit of nitre. The powder is then to be calcined; thrown, whilſt ignited, into a proper quantity of ſpirit of wine; and afterwards dried for uſe.

THIS preparation is not greatly different from the foregoing. The butter ſeems to contain more of the tin, than of the antimonial regulus, united with the marine acid of the ſublimate. The nitrous ſpirit expels the marine, and is itſelf afterwards expelled in the calcination; leaving the powder a mere calx, ſimilar to one prepared from the ſame ingredients in a leſs troubleſome manner, by deflagration with nitre.

ÆTHIOPS ANTIMONIALIS.
Antimonial ethiops.

Let equal quantities of antimony and ſea ſalt be melted together in a crucible for an hour; when grown cold, a regulus (improperly ſo called) will be found in the bottom. This is to be ſeparated from the ſcoriæ that lie above it, and ground with an equal weight of purified quickſilver, until they are united.

THIS medicine is ſaid to be of remarkable efficacy in venereal caſes of long ſtanding, in cancerous tumours, ſcorbutic and ſcrophulous diſorders, obſtinate glandular obſtructions, and ſundry other chronical diſtempers which elude the force of the common medicines. A few grains may be given at firſt; and the doſe gradually increaſed, according to its operation, to a ſcruple or more. It acts chiefly by promoting perſpiration. In ſome conſtitutions, it proves purgative; and, in others, if the doſe be conſiderable, emetic.

Sundry other preparations of this kind have been held by ſome people in conſiderable eſteem, though not taken notice of by common practice. They have been generally compoſed of mercury united by triture either with crude antimony, the medicinal regulus, or the golden or precipitated ſulphur.

Mr. Malouin, of the faculty of Paris, made trial of different methods for uniting mercury and crude antimony into an ethiops. Thoſe which ſucceeded I ſhall here extract from his *chimie medicinale.*

On grinding together two parts of antimony and one of mercury, the mercurial globules diſappeared in three hours, and the compound proved ſimilar in appearance to the ethiops made with the ſame proportions of mercury and common ſulphur. Equal parts of the antimony and mercury were united with much more difficulty, requiring the triture to be continued for two days; though it was found alſo, even with theſe proportions, that when the mercury was added, not all at once, but by little and little, the union might be effected in five hours. As common ethiops is made more perfect, in regard to the intimate union of the ingredients, by heat than by triture; the moſt perfect antimonial ethiops alſo was obtained by means of fire, in the following manner.

A heated crucible is to be rubbed in the inſide with tallow, immediately covered, and ſet in the fire. When red-hot, throw in the antimony beaten into coarſe powder, and cover the veſſel again. When the antimony is melted, take the crucible out of the fire, throw in a ſmall bit of tallow, pour an equal weight of heated mercury on different parts of the ſurface, cover the crucible for a moment, and, while the mixture is ſtill fluid, pour it out into a heated iron mortar. When grown cold, reduce it into a powder, which is to be levigated on a marble.

On this black powder the author directs ſome ſpirit of wine to be burnt two or three times. This may very ſafely be omitted, as it can nowiſe affect the medicine. The only difficulty in the proceſs relates to the degree of heat of the melted antimony. If it be not ſufficiently fluid, the mercury cannot equally unite with it; and, if over hot, great part of the mercury will be diſſipated.

Mr. Malouin commends this ethiops, as a medicine of great efficacy in glandular obſtructions, obſtinate cutaneous maladies of different kinds, inveterate rheumatiſms, &c. It acts moſt commonly by urine and perſpiration, rarely purges, or occaſions only ſome ſlight nauſeæ. The doſe is from one grain to twenty, two or three times a day, that is, from one to ſixty grains in a day. In ſome perſons a dram has no ſenſible operation; others are moved by ſix grains.

PART IV.

MEDICINAL COMPOSITIONS.

CHAPTER I.

Powders.

THIS form receives ſuch materials only, as are capable of being ſufficiently dried to become pulverable, without the loſs of their virtue. There are many ſubſtances, however, of this kind, which cannot be conveniently taken in powder. Bitter, acrid, fetid drugs, are too diſagreeable; emollient and mucilaginous herbs and roots are too bulky; pure gums cohere, and become tenacious in the mouth; fixt alkaline ſalts liquefy upon expoſing the compoſition to the air; and volatile alkalies exhale.

The doſe of powders, in extemporaneous preſcription, is generally about half a dram: it rarely exceeds a whole dram; and is not often leſs than a ſcruple. Subſtances which produce powerful effects in ſmaller doſes, are not truſted to this form, unleſs their bulk be increaſed by additions of leſs efficacy. Thoſe which require to be given in larger ones, are better fitted for other forms.

The uſual vehicle for taking the lighter powders, is any agreeable thin liquid. The ponderous powders, particularly thoſe prepared from metallic ſubſtances, require a more conſiſtent vehicle, as ſyrups; for, from thin ones, they ſoon ſubſide. Reſinous ſubſtances likewiſe are moſt commodiouſly taken in thick liquors: in thin ones, they are apt to run into lumps, which are not eaſily again diſſoluble.

General rules for making powders.

I.

Particular care ought to be taken that nothing carious, decayed, or impure, be mixed in the compoſition of powders: the ſtalks and corrupted parts of plants are to be ſeparated [*E.*]

II.

The dry aromatics ought to be ſprinkled, during their pulverization, with a few drops of any proper water [*E.*]

III.

The moiſter aromatics may be dried with a very gentle heat, before they are committed to the mortar [*E.*]

IV. Gums,

IV.

Gums, and ſuch other ſubſtances as are difficultly pulverable, ſhould be pounded along with the drier ones, that they may paſs the ſieve together [*E.*]

V.

No part ſhould be ſeparated for uſe, until the whole quantity put into the mortar has paſſed the ſieve, and the ſeveral ſiftings been mixed together; for thoſe parts of one and the ſame ſubject, which powder firſt, may prove different, at leaſt in degree of efficacy, from the reſt.

VI.

Powders of aromatics are to be prepared only in ſmall quantities at a time, and kept in glaſs veſſels very cloſely ſtopt [*E.*]

If powders be long kept, and not carefully ſecured from the air, their virtue is in great meaſure deſtroyed, although the parts in which it conſiſts ſhould not in other circumſtances prove volatile. Thus, though the virtues of ipecacuanha be ſo fixt as to remain entire even in extracts made with proper menſtrua, yet, as the college of Wirtemberg obſerves, if the powdered root be expoſed for a length of time to the air, it loſes its emetic quality.

PULVIS ANTILYSSUS.

Powder againſt the bite of a mad dog.

L. E.

Take of
- Aſh-coloured ground liverwort, two ounces;
- Black pepper, one ounce.

Beat them together into a powder.

In a former pharmacopœia, the quantity of pepper was equal to that of the herb: which rendering the powder greatly too hot, the above diminution of it became neceſſary. The virtue which this medicine has been celebrated for, is expreſſed in its title. The doſe is a dram and a half, to be taken in the morning faſting, in half a pint of cow's milk warm, for four mornings together.

PULVIS ARI COMPOSITUS.

Compound powder of arum.

Lond.

Take of
- Arum root, freſh dried, two ounces;
- Yellow water-flag roots,
- Burnet ſaxifrage roots, each one ounce;
- Crabs-eyes prepared,
- Cinnamon, each half an ounce;
- Salt of wormwood, two drams.

Beat them into a powder, which is to be kept in a cloſe veſſel.

In former editions of the London pharmacopœia, one of the ingredients in this compoſition was called *acorus vulgi* or *vulgaris*; a name which has been applied, by different writers, both to *calamus aromaticus*, and to the *gladiolus luteus*, or common yellow water-flag. In this uncertainty, the compounders generally took the former. But as the medicine was firſt contrived by a German phyſician, Birkmann; and as in ſome of the German pharmacopœias, the *acorus vulgaris* is explained to be the water-flag; the London college have now, rather in conformity to the original preſcription, than from an opinion of the virtues of the water-flag (which appear, when the root is dried and powdered, to be very inconſiderable), made choice of this laſt, and expreſſed it by the name which more clearly diſtinguiſhes it from the other. The caution of keeping the powder in a cloſe veſſel, a very neceſſary one; for if expo to the air, the alkaline ſalt, imbibing moiſture from it, would run into a liquid ſtate. Two alkaline ſalts have been generally directed; but as they differ from one another only in name, one of them is here juſtly omitted, and ſupplied by a proportionable increaſe of the other. Poſſibly the prepared crabs-eyes might alſo have been dropt, unleſs they be intended to augment the volume of the medicine (an intention not very neceſſary in this compoſition), for they do not appear to have any medicinal virtue which alkaline ſalts do not poſſeſs in a greater degree.

Agreeably to the above remark in a former edition of this book, the college of Edinburgh, in a late reviſal of their pharmacopœia, have omitted the crabs-eyes, and continued the former practice of uſing calamus aromaticus for the *acorus vulgaris*. They have likewiſe exchanged the cinnamon for canella alba; and the alkaline ſalt for a neutral one, better ſuited to the form of a powder. Their preſent formula is as follows.

Take of
- Arum roots, newly dried, two ounces;
- Calamus aromaticus,
- Burnet ſaxifrage roots, each one ounce;
- Canella alba, ſix drams;
- Vitriolated tartar, two drams.

Mix and make them into a powder.

The *pulvis ari compoſitus* was originally intended as a ſtomachic: and in weakneſſes and relaxations of the ſtomach, accompanied with a ſurcharge of viſcid humours, it is doubtleſs a very uſeful medicine. It frequently alſo has good effects in rheumatic caſes, of which I have known ſome inſtances. The doſe may be from a ſcruple to a dram, two or three times a day, in any convenient liquor. It ſhould be uſed as freſh as poſſible, for its virtue ſuffers greatly in keeping. The arum root in particular, its capital ingredient, ſoon loſes the pungency in which its efficacy principally conſiſts.

PULVIS e BOLO COMPOSITUS ſine OPIO.

Compound powder of bole without opium.

Lond.

Take of
- Bole armenic, or French bole, half a pound;
- Cinnamon, four ounces;
- Tormentil root,
- Gum Arabic, each three ounces;
- Long pepper, half an ounce.

Reduce theſe ingredients into powder.

PULVIS e BOLO COMPOSITUS cum OPIO.

Compound powder of bole with opium.

Lond.

Take of opium ſtrained, three drams.

Dry it a little, ſo as to render it eaſily pulverable; and add to it the foregoing ſpecies, that they may all beat into a powder together.

This powder, with opium, is an elegant reform of the ſpecies of Fracaſtorius's confection, commonly called *diaſcordium*; conſiſting only of ſuch of the ingredients of that compoſition, as are moſt conducive to the intention for which it is at preſent preſcribed. Forty-five grains of the powder contain one of opium.

The powder is directed to be kept in the ſhops without opium, for caſes where the aſſiſtance of that drug is not wanted. It is a warm, glutinous aſtringent; and is given, in fluxes, or other diſorders, where medicines of this claſs are proper, in doſes of a ſcruple or half a dram.

PULVIS e CERUSSA COMPOSITUS.

Compound powder of ceruſſe.

Lond.

Take of
Ceruſſe, five ounces;
Sarcocolla, an ounce and a half;
Gum tragacanth, half an ounce.
Beat them together into a powder.

THIS compoſition is the *trochiſci albi* of Razi, brought back to its original ſimplicity with regard to the ingredients, and without the needleſs trouble of making it into troches. It is employed for external purpoſes, as in collyria, lotions, and injections, for repelling acrimonious humours, and in inflammations.

PULVIS e CHELIS CANCRORUM COMPOSITUS.

Compound powder of crabs claws.

Lond.

Take of
The tips of crabs-claws prepared, one pound;
Pearls prepared,
Red coral prepared, each three ounces.
Mix them together.

Edinb.

Take of
Red coral prepared, one ounce;
Black tips of crabs-claws prepared, two ounces.
Mix them together.

THESE powders have loſt ſeveral of their ingredients, without any injury to their virtues; and poſſibly they would ſtill bear a further reduction; for both the crabs-eyes and claws are by themſelves at leaſt as effectual as any compoſition of them with pearls and coral. In ſome of our hoſpitals, the following compoſition is ſubſtituted.

PULVIS TESTACEUS COMPOSITUS.

Compound teſtaceous powder.

Take of
Oyſter ſhells prepared, one pound;
White chalk, half a pound.
Mix them together.

THIS cheap abſorbent powder is at leaſt equally valuable, as a medicine, with the more coſtly and compounded crabs-claw and bezoardic powders of the ſhops. Theſe kinds of preparations are given from half a ſcruple to half a dram, for abſorbing or deſtroying acidities in the firſt paſſages; which ſeems to be the only good effect that can be reaſonably expected from theſe ſimple antacid earths. If they meet with no acid to diſſolve them, they promiſe to be injurious rather than beneficial. They have often been given in fevers, under the notion of alexipharmacs and ſudorifics, from a ſuppoſition that theſe diſorders are occaſioned by a latent acid; and, though this theory is now exploded, the practice built upon it is, in good meaſure, ſtill continued. So far are abſorbents from being uſeful in theſe caſes, that ſubſtances of a directly contrary quality, mild acidulous liquors, are in general the moſt ſucceſsful remedies, wherever the vis vitæ is not too far depreſſed; and, where it is, the inſipid indolent earths can contribute nothing to ſupport or raiſe it.

It may here be proper to take notice of a quality hitherto little expected from theſe kinds of ſubſtances; that of ſtrongly promoting putrefaction. Fleſh mixed with a ſmall proportion of chalk, and expoſed to a heat equal to that of the human body, not only corrupts ſooner than without this addition, but likewiſe in a far greater degree, reſolving in a few days into a perfect mucus. This quality of the abſorbent powders (for the diſcovery of which, with many other curious experiments on the ſame ſubject, the public is obliged to the ingenious Dr. Pringle) ſeems to forbid their uſe in all thoſe kinds of fevers, where the animal juices are already too much diſpoſed to a putrefactive ſtate. We have before obſerved, that, in theſe caſes, though very frequently employed, they are at beſt unſerviceable. Perhaps their ill effects would be oftener ſeen, if it were not for the quantity of acids uſually given in acute diſeaſes.

PULVIS BEZOARDICUS.

Bezoardic powder.

Lond.

Take of
- Compound powder of crabs-claws, one pound;
- Oriental bezoar prepared, one ounce.

Mix them together.

Bezoar has hitherto been an ingredient in the foregoing compoſition, which was then called Gaſcoigne's powder; though notwithſtanding the addition which this article made to the price, it added nothing to the virtue of the medicine. The college of London has therefore very prudently directed an abſorbent powder, without this coſtly article; and compoſed another, diſtinguiſhed by its name, for the uſe of thoſe who expect any particular virtues from it. The Edinburgh college have entirely expunged this unneceſſary drug, and take no further notice of it in their pharmacopœia, than barely giving it a place in the catalogue of ſimples.

PULVIS CONTRAYERVÆ COMPOSITUS.

Compound powder of contrayerva.

Lond.

Take of
- Compound powder of crabs-claws, a pound and a half;
- Contrayerva root, five ounces.

Make them into a powder.

Edinb.

Take of
- Contrayerva root, ſix drams;
- Virginian ſnakeroot, two drams;
- Engliſh ſaffron, one dram;
- Compound powder of crabs-claws, two ounces.

Make them into a powder.

These powders were formerly directed to be made up into balls with water (and then called Lapis contrayervæ); a piece of trouble now laid aſide as needleſs; for it was neceſſary to reduce the balls into powder again before they could be uſed. Nor did that form contribute, as has been imagined, to their preſervation; for it is ſcarce to be ſuppoſed, that the powder will loſe more by being kept for a reaſonable length of time in a cloſe-ſtopt glaſs, than the balls will, in the humectation with water, and exſiccation in the air, before they are fit for being put by to keep. Theſe medicines have a much better claim to the title of alexipharmac and ſudorific, than the two foregoing compoſitions. The contrayerva, ſnakeroot, and ſaffron, by themſelves are ſuch, and prove very ſerviceable in low fevers, where the vis vitæ is weak, and a diaphoreſis to be promoted. It is poſſible, that the crabs-claw powders are of no further ſervice, than as they divide theſe powerful ingredients, and render them ſupportable to the ſtomach.

PULVIS ad EPILEPTICOS de GUTTETA dictus.

Epileptic powder.

Edinb.

Take of
  Wild valerian root,
  Peony root, of each equal parts.
Make them into a powder.

This powder has undergone a great reduction of its ingredients, to its advantage as a medicine; the articles rejected being either inſignificant, or at beſt far inferior to thoſe retained, and conſequently increaſing the bulk of the compoſition, without communicating a proportionable ſhare of efficacy. Perhaps, for the ſame reaſon, the peony roots are not altogether unexceptionable. The powder, however, as now reformed, may be looked on as a medicine of ſome importance for the purpoſes expreſſed in its title, far ſuperior to thoſe of ſimilar intention in other pharmacopœias. The doſe is from ten grains to half a dram for children, and from half a dram to two drams for adults. The abſorbent powders, generally directed in theſe kinds of compoſitions, are here more prudently omitted, as they may eaſily be mixed extemporaneouſly, where particular caſes may require them. For children, theſe additions are often neceſſary, as in moſt of their diſorders, acidities in the firſt paſſages have a conſiderable ſhare. In adults, they are rarely of uſe.

PULVIS e MYRRHA COMPOSITUS.

Compound powder of myrrh.

Lond.

Take of
  Rue leaves, dried,
  Dittany of Crete,
  Myrrh, each an ounce and a half;
  Aſafetida,
  Sagapenum,
  Ruſſia caſtor,
  Opopanax, each one ounce.
Beat them together into a powder.

This is a reformation of the *trochiſci e myrrha*, a compoſition contrived by Razi againſt uterine obſtructions. It may be taken in any convenient vehicle, or made into boluſes, from a ſcruple to a dram or more, two or three times a day.

PULVIS ad PARTUM.

Powder to promote delivery.

Edinb.

Take of
  Borax, half an ounce;
  Caſtor,
  Saffron, each a dram and a half;
  Oil of cinnamon, eight drops;
  Oil of amber, ſix drops.
Beat the ſpecies together into a powder, to which add the oils, and mix the whole well together.

This medicine has long been held in eſteem for the purpoſe expreſſed in its title: nevertheleſs, its real efficacy, and what ſhare thereof is owing to each of the ingredients, has not been ſufficiently determined: the borax, though by ſome thought to be of little importance, does not perhaps contribute the leaſt to its virtue. The doſe is from a ſcruple to a dram, or ſo much as can be conveniently taken up at once on the point of a knife. It ſhould be kept in a very cloſe veſſel, otherwiſe it will ſoon loſe a conſiderable deal of its more valuable parts.

PULVIS e SCAMMONIO COMPOSITUS.

Compound powder of ſcammony.
Lond.

Take of
Scammony, four ounces;
Calcined hartſhorn prepared, three ounces.
Grind them diligently together into a powder.

Here the ſcammony is divided by the earthy calx, and thus rendered ſomewhat more ſoluble, and leſs adheſive. Hence its purgative quality is promoted, at the ſame time that it becomes leſs griping. The doſe of the compound is from fifteen grains to half a dram.

This powder has been uſually prepared with diaphoretic antimony and cryſtals of tartar (inſtead of the calcined hartſhorn before directed) and called, from its firſt publiſher, PULVIS CORNACHINI, which, in the Edinburgh pharmacopœia, is thus directed.

Take of
Diaphoretic antimony,
Cream of tartar,
Scammony, each equal parts.
Make them into a powder.

This may be given to the quantity of a dram or more. In other preſcriptions, the tartar and antimonial calx bear nearly the ſame proportion to the ſcammony, as the calcined hartſhorn in the preceding formula. It appears probable, that neither of theſe ingredients are of any further uſe, than as they divide the texture of the ſcammony; though Cornachini propoſes notable advantage from ſome deobſtruent quality in the tartar, whereby the veſſels ſhall be opened, and the noxious humours prepared for expulſion; and from the preparation of antimony, tho' it have no ſenſible operation, he expects ſome ſhare of the ſame ſucceſs, which ſometimes attends the rougher preparations of that mineral.

PULVIS e SENA COMPOSITUS.

Compound powder of ſena.
Lond.

Take of
Cryſtals of tartar,
Sena, each two ounces;
Scammony, half an ounce;
Cloves,
Cinnamon,
Ginger, each two drams.
Powder the ſcammony by itſelf; and all the other ingredients together. Then mix them.

PULVIS DIASENNÆ.

Edinb.

Take of
Cream of tartar,
Sena, each two ounces;
Scammony,
Ginger, each half an ounce.
Make them into a powder.

These powders are given as cathartics, in the doſe of two ſcruples, or a dram. The ſpices are added, not only to divide, but to warm the medicine, and make it ſit eaſier on the ſtomach. The ſcammony is uſed as a ſtimulus to the ſena. The quantity of the latter neceſſary for a doſe, when not aſſiſted by ſome more powerful material, is too bulky to be conveniently taken in this form.

PULVIS STERNUTATORIUS.

Sternutatory powder.
Lond.

Take of
Aſarum,
Marjoram,

Marum Syriacum leaves, dried,
Lavender flowers, dried, each equal weights.
Rub them together into a powder.

PULVIS CEPHALICUS.
Cephalic powder.
Edinb.

Take of
The leaves of aſarum, three parts;
Leaves of marjoram, one part.
Beat them together into a powder.

The titles of theſe powders ſufficiently expreſs their intention. They are both agreeable and efficacious errhines, and ſuperior to moſt of thoſe uſually ſold under the name of herb ſnuff.

PULVIS STYPTICUS.
Styptic powder.
Edinb.

Take of
Alum, half an ounce;
Gum kino, three drams.
Rub them together into a powder.

This powder has long been in repute as an aſtringent, under the title of Pulvis stypticus Helvetii. It is undoubtedly a very powerful medicine: though the gum kino ſeems to have little ſhare in its effects. Some direct the ingredients to be melted together before they are powdered. But this circumſtance does not appear to be neceſſary.

PULVIS e SUCCINO COMPOSITUS.
Compound powder of amber.
Lond.

Take of
Amber prepared,
Gum Arabic, each ten drams;
Juice of hypociſtis,
Balauſtines,
Japan earth, each five drams;
Olibanum, half an ounce;
Strained opium, one dram.
Beat them together into a powder.

This powder is compoſed of the more unexceptionable ingredients of the Trochisci e carabe of a former pharmacopœia. The articles omitted, which are as many in number as thoſe now retained, were manifeſtly abſurd or ſuperfluous; and the making it up into troches, a very unneceſſary trouble. The medicine, as now reformed, may be looked upon as an uſeful, and tolerably elegant aſtringent; though poſſibly the ingredient which it receives name from, contributes little to its virtue. Two ſcruples of the compoſition contain one grain of opium.

PULVIS e TRAGACANTHA COMPOSITUS.
Compound powder of gum tragacanth.
Lond.

Take of
Gum tragacanth,
Gum Arabic,
Marſhmallow root, each an ounce and a half;
Starch,
Liquorice, each half an ounce;
Double refined ſugar, three ounces.
Grind them into a powder.

PULVIS DIATRAGACANTHI.
Edinb.

Take of
Gum tragacanth, one ounce and a half;
Marſhmallow root,
Liquorice,
Starch, each half an ounce.
Beat them together into a powder.

Both theſe powders are mild emollients; and hence become ſerviceable in hectic caſes, tickling coughs, ſtrangury, ſome kinds of alvine fluxes, and other diſorders proceeding from a thin acrimonious ſtate of the humours, or an abraſion of the mucus of the inteſtines. They ſoften, and give a greater degree of conſiſtency to the former, and defend the latter from being irritated or excoriated by them. All the ingredients coincide in theſe general intentions. The marſhmallow root, however, is ſomewhat too bulky for this form, and likewiſe ſubjects the compoſition to grow mouldy in keeping; an inconvenience to which the cold ſeeds formerly employed in theſe powders were particularly liable. The doſe is from half a dram to two or three drams, which may be frequently repeated.

HIERA PICRA.

Lond.

Take of
- The gum extracted from Socotorine aloes, one pound;
- Canella alba, three ounces.

Beat them ſeparately into powder, and then mix them together.

Pulvis HIERA PICRA dictus.

Edinb.

Take of
- Socotorine aloes, four ounces;
- Virginian ſnakeroot,
- Ginger, each half an ounce.

Mix, and beat them into a powder.

These compoſitions were originally directed to be made into an electary. With us, they have been rarely uſed in that form, and not often in this of a powder, on account of their great nauſeouſneſs. They are chiefly employed as the baſis of a tincture called *tinctura ſacra.*

SPECIES AROMATICÆ.

Aromatic ſpecies.

Lond.

Take of
- Cinnamon, two ounces;
- Leſſer cardamom ſeeds, huſked,
- Ginger,
- Long pepper, each one ounce.

Beat them together into a powder.

PULVIS DIAROMATON.

Aromatic powder.

Edinb.

Take of
- Nutmegs,
- Leſſer cardamom ſeeds,
- Ginger, each equal parts.

Beat them together into a powder.

Both theſe compoſitions are agreeable, hot, ſpicy medicines; and may be uſefully taken in cold phlegmatic habits, and decayed conſtitutions, for warming the ſtomach, promoting digeſtion, and ſtrengthening the tone of the viſcera The doſe is from ten grains to a ſcruple and upwards. The firſt is conſiderably the warmeſt.

SPECIES e SCORDIO ſine OPIO.

Species of ſcordium without opium.

Lond.

Take of
- Bole armenic, or French bole, four ounces;
- Scordium, two ounces;
- Cinnamon, an ounce and a half;
- Storax ſtrained,
- Tormentil root,
- Biſtort root,
- Gentian,
- Dittany of Crete,
- Galbanum ſtrained,
- Gum Arabic,
- Red roſes, each one ounce;
- Long pepper,
- Ginger, each half an ounce.

Reduce them into powder.

SPECIES

SPECIES e SCORDIO cum OPIO.

Species of ſcordium with opium.

Lond.

Take of ſtrained opium, three drams.

Dry it a little, that it may eaſily pulverize; and add it to the foregoing ſpecies in the beating, that they may be all reduced into a powder together.

This is the ſpecie of Fracaſtorius's confection or diaſcordium, which has been hitherto kept in the ſhops in the form of an electary only, but is now judiciouſly directed in that of a powder alſo, both with and without the opium. When made into an electary, the medicine, in keeping, loſes much of its aſtringency, in which conſiſts great part of its virtue. As this compoſition has in common practice been looked upon as a medicine of great conſequence, and its effects determined by long experience; the college has made no further alteration in its ingredients, than ſubſtituting red roſes themſelves to the ſugar of roſes; omitting ſorrel ſeeds, which are certainly inſignificant; and ſupplying the Lemnian earth, which with us is ſcarce ever met with genuine, by a proper increaſe of the bole. They have nevertheleſs given an elegant reformation of it, in the *pulvis e bolo, cum et ſine opio.* There, the ſcordium, ſtorax, gentian, dittany, ginger, and galbanum, are rejected, as being either ſuperfluous or contrary to the intention; whilſt an increaſe of the tormentil root amply ſupplies the loſs of the biſtort and roſes. The quantity of opium is the ſame in both, viz. one grain in forty-five of the compoſition.

PULVIS TESTACEUS CERATUS.

Cerated teſtaceous powder.

Edinb.

Melt ſome yellow bees-wax over a gentle fire; and carefully ſtir into it, by little and little, as much of the compound powder of crabs-claw as the wax will take up.

This preparation, made with oyſter-ſhells, inſtead of the crabs-claw powder, has been in uſe for ſome time in the Edinburgh infirmary. It is given to the quantity of a dram, twice a day, in diarrhœas and dyſenteries, wherever the viſcera are ſubject to be eroded by acrimonious humours, and in immoderate uterine diſcharges. Its virtue ſeems to depend wholly upon the wax, the earthy powder being of no further uſe than to divide that concrete, and render it miſcible with the animal fluids.

Pulvis arthriticus amarus.

Bitter gout powder.

Pariſ.

Take of
- Gentian root,
- Round birthwort root,
- Rhapontic root,
- Germander leaves,
- Groundpine leaves,
- Leſſer centaury tops, of each equal parts.

Make them into a powder.

Compositions of this kind were in uſe among the ancient Greek phyſicians, and made a conſiderable part of their practice in gouty and arthritic complaints. But while they beſtow great praiſes on them in cold and phlegmatic conſtitutions, they very properly condemn them as being extremely hurtful in the hot and bilious. Afterwards, on account probably of the ill conſequences ariſing from their indiſcriminate uſe, theſe medicines fell into neglect, till the introduction of the Greek volumes into the weſtern parts of Europe, when they were tranſcribed by ſome of the earlier medical writers, and brought into ſome eſteem in Italy, Germany, Switzerland, &c. A form differing from the above only in the omiſſion of the rhapontic root, was ſome years ago brought thence, as a family receipt, by a perſon of high rank, who having experienced remarkable benefit from it in an hereditary gout, ordered it to be printed, and copies delivered to all who ſhould aſk for them. (See the Medical Obſervations and Inquiries, publiſhed by a ſociety of phyſicians in London, vol. i. p. 126.) The directions for uſing this medicine are to the following effect.

"Take one dram of the powder
" every morning faſting, in a cup
" of any agreeable liquor, faſting
" an hour and a half after it.
" Continue this for three months
" without interruption, then di-
" miniſh the doſe to three quarters
" of a dram for three months
" longer, then to half a dram for
" ſix months more. After the firſt
" year, it will be ſufficient to take
" half a dram every other day.
" As this medicine operates in-
" ſenſibly, it will take perhaps
" two years before any great be-
" nefit is received. In rheuma-
" tiſms that are only accidental, a
" few of the dram doſes may do:
" but in habitual rheumatiſms,
" and ſuch as are of long ſtanding,
" it muſt be taken as for the gout.
" The remedy requires patience, as
" it operates but ſlow in both
" caſes."

Dr. Clephane remarks (in the learned and judicious paper above referred to) that this medicine will probably do good in many caſes, for in many caſes there is reaſon to believe it extremely proper; but that an indiſcriminate uſe of it will probably again do what a like abuſe formerly did, bring a good medicine into diſrepute.

PULVIS CATHARTICUS SALINUS.
Saline cathartic powder.

Take of
Vitriolated tartar,
Cryſtals of tartar, each one dram;
Sal prunel, or purified nitre, one ſcruple.
Make them into a powder.

THIS is an uſeful cathartic in inflammatory diſorders, and a viſcid impure ſtate of the juices. The quantity here directed is intended for one doſe, which ſhould be accompanied with plentiful dilution.

PULVIS CARMINATIVUS.
Carminative powder.

Take of
Aniſeed,
Sweet fennel ſeed, each two ſcruples;
Ginger, one ſcruple;
Nutmegs, half a ſcruple;
Fine ſugar, half a dram.
Reduce them into a powder, for four doſes.

THIS powder is employed for expelling flatulencies ariſing from indigeſtion, particularly thoſe to which hypochondriacal and hyſterical perſons are ſubject. It is likewiſe uſefully given in the gripes of young children, either mixed with their food or otherwiſe.

PULVIS DIURETICUS.
Diuretic powder.

Take of
Sal prunel, ten grains;
Salt of amber, four grains;
Oil of turpentine, three drops;
Fine ſugar, one ſcruple.

Drop the oil upon the ſugar, then add the ſalts, and grind the whole together.

This powder is a very efficacious diuretic, and may be given to advantage in caſes where the aſſiſtance of ſuch forcing medicines is required. The ſalts ſomewhat abate the heating quality of the oil, and, at the ſame time, cool and relax the paſſages.

Pulvis roborans.

Strengthening powder.

Take of
Extract of Peruvian bark, twelve grains;
Salt of ſteel, two grains;
Oil of cinnamon, one drop;
Fine ſugar, half a dram.
Having mixed the oil with the ſugar, add the other ingredients, and grind the whole well together, for two doſes.

This medicine has a much better title to the appellation of a ſtrengthener, than thoſe uſually met with under that name in diſpenſatories. In lax habits, debilities of the nervous ſyſtem, and the weakneſſes peculiar to either ſex, it has generally good effects.

Pulvis ad strumas.

Powder againſt the king's evil.

Take of
Burnt ſponge, one ſcruple;
Nitre,
Coralline,
Fine ſugar, each half a ſcruple.
Reduce them into powder.

This powder is recommended in ſcrophulous diſorders and obſtructions of the glands. It is ſuppoſed to open and deterge the minute veſſels, and carry off the offending matter by urine. Dr. Mead informs us, in his *Monita medica*, that he very frequently experienced its good effects. He uſed to give the quantity above preſcribed twice a day, with three or four glaſſes of the leſs compounded lime-water along with each doſe. If the patient were much emaciated, the lime-water was mixed with about an equal quantity of milk.

Pulvis temperans.

Take of
Vitriolated tartar,
Purified nitre, each three drams;
Cinnabar, finely levigated, two ſcruples.
Make them into a ſubtile powder.

These kinds of powders are in frequent uſe among foreign phyſicians in all diſorders accompanied with immoderate heat or exagitation of the humours. They are called alſo, eſpecially when abſorbents are joined, *pulveres præcipitantes*, and *antiſpaſmodici.* They are given in doſes of only a few grains at a time, but repeated at ſhort intervals.

Pulvis vermifugus.

Vermifuge powder.

Take of 1.
Tanſy flowers,
Worm-ſeed, each three drams;
Salt of ſteel, one dram.
Make them into a powder.

Take of 2.
Tin reduced into fine powder, two drams;
Ethiops mineral, half a dram;
Fine ſugar, one ſcruple.
Mix them well together.

Take of 3.
Choice rhubarb, three drams;
Scammony,
Calomel, each one dram.
Mix and make them into a powder.

All

All theſe compoſitions are well calculated for the purpoſe expreſſed in the title. The firſt is given in the hoſpitals, in doſes of half a dram twice a day; which quantity contains about four grains and a half of the ſalt of ſteel. The ſecond is divided into three or four doſes; one of which is taken every morning, and a cathartic on the day following. The third, which is a briſk purgative, is uſed, in the quantity of half a dram, after the others have been premiſed; or it is taken once or twice a week without their aſſiſtance.

CHAPTER II.

Troches and lozenges.

TROCHES and lozenges are compoſed of powders made up with glutinous ſubſtances into little cakes, and afterwards dried. This form is principally uſed for the more commodious exhibition of certain medicines, by fitting them to diſſolve ſlowly in the mouth, ſo as to paſs by degrees into the ſtomach. Hence theſe preparations have generally a conſiderable proportion of ſugar, or other materials grateful to the palate. Some powders have likewiſe been reduced into troches, with a view to their preſervation; though poſſibly for no very good reaſons. Since the moiſtening, and afterwards drying them in the air, muſt in this light be of greater injury, than any advantage accruing from this form can counterbalance.

General rules for making troches.

I.

The three firſt rules laid down for making powders, are alſo to be obſerved in the powders for troches [*E.*]

II.

If the maſs prove ſo glutinous as to ſtick to the fingers in making up, the hands may be anointed with any convenient ſweet or aromatic oil; or ſprinkled with powder of ſtarch, or with that of liquorice [*E.*]

III.

In order to thoroughly dry the troches, put them on an inverted ſieve, in a ſhady, airy place, and frequently turn them [*E.*]

IV.

Troches are to be kept in glaſs veſſels, or in earthen ones well glazed [*E.*]

TROCHISCI ALBI RHASIS, ſeu SIEF ALBUM.

The white troches, or dry collyrium of Razi.

Edinb.

Take of

Ceruſſe, three ounces;
Sarcocolla, one ounce;
Gum tragacanth, three drams;
Camphor, one dram;
Roſe-water, as much as is ſufficient.

Make them into troches according to art.

The making of theſe ingredients into troches is an unneceſſary trouble; ſince, before they are uſed, they muſt be powdered again, for being mixed with roſe-water or other liquors, for the purpoſes of a cooling, antacrid, and moderately aſtrictive collyrium, injection, &c. The London college has therefore directed them to be kept in the form of powder (under the title of *pulvis e ceruſſa compoſitus)* omitting the camphor, which is not found in the original of Razi.

TROCHISCI BECHISI ALBI.

White pectoral troches.

Lond.

Take of

Double-refined ſugar, a pound and a half;
Starch, an ounce and a half;
Liquorice, ſix drams;

Florence orris root, half an ounce.

Reduce theſe ingredients into powder, which is to be made up into troches with a proper quantity of mucilage of gum tragacanth.

Edinb.

Take of

White ſugar, one pound;

Gum Arabic, four ounces;

Starch, one ounce;

Flowers of benzoine, half a dram.

Reduce them to a fine powder, and make them into a maſs with roſe water, and form them into troches.

These compoſitions are very agreeable pectorals, and may be uſed at pleaſure. They are calculated for ſoftening acrimonious humours, and allaying the tickling in the throat, which provokes coughing.

TROCHISCI BECHICI NIGRI.

Black pectoral troches.

Lond.

Take of

Extract of liquorice,

Double-refined ſugar, each ten ounces;

Gum tragacanth, half a pound.

Drop upon theſe ingredients ſo much water as will make the maſs ſoft enough to be formed into troches.

Edinb.

Take of

Extract of liquorice,

Gum Arabic, each four ounces;

White ſugar, eight ounces.

Diſſolve them in boiling water, and ſtrain; afterwards evaporate the liquor with a gentle fire, to a proper conſiſtence to be made into troches.

These compoſitions are deſigned for the ſame purpoſes as the white pectoral troches before deſcribed. In foreign pharmacopœias there are ſome other troches of this kind, under the titles of *trochiſci becchici flavi* and *rubri*; the former are coloured with ſaffron, the latter with bole armenic. The diſſolving and ſtraining of the extract of liquorice and gum Arabic, as now ordered in the latter of theſe preſcriptions, is a conſiderable improvement; not only as they are by thoſe means more uniformly mixed than they can well be by beating; but likewiſe as they are thereby purified from the heterogeneous matters, of which both thoſe drugs have commonly no ſmall admixture.

TROCHISCI de MINIO.

Red lead troches.

Edinb.

Take of

Red lead, half an ounce;

Corroſive mercury ſublimate, one ounce;

Crumb of the fineſt bread, four ounces.

Make them up with roſe-water into oblong troches.

These troches are employed only for external purpoſes as eſcharotics. They are powerfully ſuch, and require a good deal of caution in their uſe.

TROCHISCI de MYRRHA.

Troches of myrrh.

Edinb.

Take of

Myrrh, one ounce and a half;

Lovage ſeed,

Pennyroyal leaves,

Ruſſia caſtor,

Galbanum, each one ounce;

Eſſential oil of ſavin, half a dram;

Elixir proprietatis, as much as is ſufficient.

Let the gum be ſoftened with the elixir into a maſs of the conſiſtence of honey; then add the oil and powders, and make the whole into troches according to art.

These troches are very well contrived, in regard to efficacy, and ſuperior to thoſe in moſt other pharmacopœias, under the ſame title. Madder and cummin ſeed, two of their former ingredients, which were objected to in a former edition of this work, are now expunged; the one as being an unneceſſary article; the other as being an offenſive one, and not of ſimilar intention with the reſt. In the place of this laſt, lovage ſeed is introduced, which is doubtleſs more agreeable to the intention of the medicine. Aſafetida is ſupplied by an increaſe of the galbanum; and the eſſential oil of rue, by an increaſe of the oil of ſavin. There ſeems to be no occaſion for making a medicine of this kind into troches, as it cannot be conveniently taken in that form. The London college have therefore exchanged their Trochisci *e myrrha* for a Pulvis *e myrrha compoſitus*, which ſee.

TROCHISCI e NITRO.

Troches of nitre.

Lond.

Take of

Nitre purified, four ounces;

Double-refined ſugar, one pound.

Make them into troches, with mucilage of gum tragacanth.

This is a very agreeable form for the exhibition of nitre; though, when the ſalt is thus taken without any liquid (if the quantity be conſiderable), it is apt to occaſion uneaſineſs about the ſtomach, which can only be prevented by large dilution with aqueous liquors.

TROCHISCI e SCILLA.

Troches of ſquills.

Lond.

Take of

Baked ſquills, half a pound;

Wheat flower, four ounces.

Beat them together, and form the maſs into troches, which are to be dried with a gentle heat.

This preparation is uſed only as an ingredient in the theriaca. The deſign of baking the ſquills is, to abate their acrimony; and making it afterwards into troches ſeems the moſt convenient way of drying it. Common wheat flower is as fit for this purpoſe as any, though that of the white vetch has been generally directed.

TROCHISCI e SULPHURE.

Troches of ſulphur.

Lond.

Take of

Flowers of ſulphur, waſhed, two ounces;

Double-refined ſugar, four ounces.

Beat them together, and adding ſome mucilage of quince ſeeds, form them into troches.

TROCHISCI DIASULPHURIS.

Troches of ſulphur.

Edinb.

Take of

Flowers of ſulphur, two ounces;

Of benzoine, one ſcruple;

Factitious cinnabar, half a dram;

White ſugar, four ounces.

Mix them well together, and form them into troches with mucilage of gum tragacanth.

These compoſitions are to be conſidered only as agreeable forms for the exhibition of ſulphur, no alteration or addition being here made to its virtue; unleſs that, by the flowers of benzoine in the ſecond preſcription, the medicine is ſuppoſed to be rendered more efficacious as a pectoral.

TROCHISCI e TERRA JAPONICA.

Troches of Japan earth.

Lond.

Take of
Japan earth,
Gum Arabic, each two ounces;
Sugar of roſes, ſixteen ounces.
Beat them together, and, dropping in ſome water, make them into troches.

Edinb.

Take of
Japan earth, two ounces;
Gum tragacanth, half an ounce;
White ſugar, one pound;
Roſe-water, a ſufficient quantity.
Make them into troches.

A preparation of this kind, with the addition of ambergris and muſk, which are here more prudently omitted, has long been in ſome eſteem as a mild reſtringent, &c. under the title of Catechu. Medicines of this claſs in general are excellently fitted for the form of troches; for, when ſlowly and gradually received into the ſtomach, as this form occaſions them to be, they produce much better effects, than if an equal quantity were taken at once. The troches of Japan earth are ſufficiently palatable, and of conſiderable ſervice in ſome kinds of coughs, thin acrid defluxions, diarrhœas, &c.

TABELLÆ CARDIALGICÆ.

Cardialgic lozenges.

Lond.

Take of
Chalk prepared, four ounces;
Crabs-claws prepared, two ounces;
Bole armenic, or French bole, half an ounce;
Nutmegs, one ſcruple;
Double-refined ſugar, three ounces.
Reduce theſe ingredients into powder, and make them into troches with water.

TROCHISCI CARDIALGICI.

Edinb.

Take of
Oyſterſhells prepared,
White chalk powdered, each two ounces;
Gum Arabic, half an ounce;
Nutmegs, half a dram;
White ſugar, ſix ounces;
Common water, a ſufficient quantity.
Make them into troches according to art.

These compoſitions are calculated againſt that uneaſy ſenſation at the ſtomach, improperly called the heartburn; in which they often give immediate relief, by abſorbing and neutralizing the acid juices that occaſion this diſorder. The abſorbent powders here made uſe of, are of the moſt powerful kind, though there does not ſeem to be any occaſion for uſing more than one of them. Some have preſcribed the following formula.

Tabellæ antacidæ.

Antacid lozenges.

Take of
Prepared white chalk, four drams;
Candied ginger, three drams;
Cinnamon, one dram;
Fine ſugar, diſſolved in water, as much as is ſufficient to reduce the whole into a due conſiſtence for being formed into lozenges.

Here it may be obſerved, that all theſe compoſitions, though very effectual for the intention, are accompanied with an inconvenience, which is frequently complained of in their uſe; their binding the belly. The uſe of the chalk, oyſterſhells, and crabs-claws, is to abſorb acidities; and both theſe and the other common abſorbents, united with acids, compoſe aſtringent concretes. The following compoſition is free from this inconvenience.

Tabellæ antacidæ laxantes.

Laxative antacid lozenges.

Take of
- Magneſia alba, ſix ounces;
- Double-refined ſugar, three ounces;
- Nutmegs, one ſcruple.

Mix them well together, and form them into troches with mucilage of gum tragacanth.

SACCHARUM ROSACEUM.

Sugar of Roſes.

Lond.

Take of
- Red roſe buds, freed from the heels, and haſtily dried, one ounce;
- Double-refined ſugar, one pound.

Reduce them ſeparately into powder, then mix, and moiſten them with water, that they may be formed into troches, which are to be dried by a gentle heat.

In the Edinburgh pharmacopœia, this preparation is directed as follows.

TABELLÆ ROSACEÆ.

Roſe tablets.

Edinb.

Take of
- Conſerve of red roſes, four ounces;
- White ſugar, in powder, one pound.

If any moiſture be required, take of ſyrup of dry roſes a ſufficient quantity for forming them into troches, which are to be dried with a gentle heat.

The ſugar of roſes was formerly made, by boiling a pound of fine ſugar with four ounces of the juice of red roſes, over a gentle fire, till the juice was almoſt all evaporated; then throwing in an ounce of dry red roſes reduced to a very fine powder; after which the matter was poured out upon a marble, and formed into lozenges. The two methods above directed, are more ſimple and commodious; though, if any virtue be expected from the roſes, the medicine is not at all improved by the alteration. As the conſerve contains only one-fourth of its weight of roſes, in a freſh ſtate, it is obvious that the quantity of freſh roſes in the ſecond preſcription is leſs than that of the dry ones in the firſt.

Theſe preparations are chiefly valued for their agreeableneſs to the eye and palate. Some likewiſe eſteem them, medicinally, as light reſtringents; and look upon them, not undeſervedly, as an excellent addition to milk in phthiſical and hectic caſes. Some have been accuſtomed to add a portion of acid in making theſe preparations, which improves the colour, but renders them unfit to be taken with milk.

Tabellæ anthelminticæ.

Anthelmintic ſugar-cakes.

Take of 1.
- Powdered tin, half a dram;
- Fine ſugar, half an ounce;
- Roſe-water, a ſufficient quantity to make them into a maſs for tablets.

Take of 2.
Scammony,
Mercurius dulcis, each four grains;
Fine ſugar, half an ounce;
Roſe water, a ſufficient quantity to make them into tablets.

These compoſitions are calculated for children, who are not eaſily prevailed on to take anthelmintic medicines in leſs agreeable forms. If the firſt be made uſe of, it muſt be repeated three or four mornings ſucceſſively, after which a purge is to be taken: the ſecond, if it require repetition, is to be given only every other morning. The proportions of the ingredients are to be varied, according to the age and ſtrength of the patient.

TROCHISCI NERVINI.

Nerve troches.

Take of
Compound ſpirit of lavender, ſixty drops;
Oil of cinnamon,
Oil of roſemary, each four drops;
Florence orris root, two drams;
Fine ſugar, one ounce;
Mucilage of gum tragacanth, as much as will reduce them into a maſs, which is to be formed into troches of about half a ſcruple each.

One or two of theſe troches, taken occaſionally, and ſuffered to diſſolve in the mouth, prove ſerviceable to thoſe who are ſubject to paralytic and other nervous diſorders. Warm aromatic medicines given in this form and manner, are ſuppoſed, from their ſlow diſſolution in the mouth, to affect the nervous ſyſtem more immediately than if received at once into the ſtomach.

MORSULI PURGANTES.

Purging tablets.

Take of
Cryſtals of tartar, half an ounce;
Scammony, three drams;
Oil of cinnamon, four drops;
Double-refined ſugar, eight ounces.
Make them up, with roſe-water, into troches, weighing each about a dram.

This is a ſufficiently elegant form for purgative troches. Each of the *morſuli* contains two grains and a half of ſcammony.

MORSULI de RHABARBARO.

Rhubarb troches.

Take of
Cream of tartar,
Rhubarb, each two drams;
Freſh lemon peel, half a dram;
Fine ſugar, four ounces.
Make them into troches with roſe-water.

Two drams of theſe troches contain about ſeven grains of rhubarb, and as much of cream of tartar. Both this and the preceding compoſition are among the officinals of the Brandenburgh pharmacopœia.

MORSULI RESTAURANTES KUNCKELII.

Kunckel's antimonial tablets.

Take of
The beſt Hungarian antimony, levigated into an impalpable powder, three drams and a half;
Sweet almonds peeled,
Freſh pine nuts, each half an ounce;
Cinnamon, one dram;
Leſſer cardamom ſeeds, huſked, half a dram;
Double-refined ſugar, four ounces.
Diſſolve the ſugar in equal quantities of cinnamon-water and roſe-water;

water; then mix therewith the other ingredients, and form the whole into tablets weighing one dram each.

These tablets were brought into eſteem by Kunckel, at a time when the internal uſe of crude antimony was almoſt univerſally reckoned poiſonous. He had recourſe to them as a deſperate medicine, in violent pains and contractions of the arms, after all the common methods of cure had been uſed without any relief; and being happily, in a ſhort time, perfectly freed from his complaints, he made trial of them in ſeveral other caſes, with remarkable ſucceſs. He ſeems to have begun with doſes of four or five grains (that is one of the tablets before preſcribed) which were repeated thrice a day, and gradually increaſed to a dram or more of the antimony every day.

Trochisci sialagogi.

Sialagogue troches.

Take of
Pellitory of Spain, half an ounce;
Maſtich, two drams;
Oil of cloves and marjoram, each one dram;
Yellow wax, a ſufficient quantity.
Make them into troches or pellets.

One of theſe troches is to be occaſionally held in the mouth, and chewed, to promote a diſcharge of ſaliva; which they effect by warming and ſtimulating the ſalival glands.

Trochisci stomachici.

Stomachic troches.

Take of
Hard extract of Peruvian bark, one dram;
Oil of cinnamon,
Oil of mint, each ten drops;
Fine ſugar, four ounces.
Make them into troches, with mucilage of gum tragacanth.

These troches are of ſervice for warming and ſtrengthening the ſtomach, expelling flatulencies, and promoting digeſtion. For theſe purpoſes they are as effectual as any thing that can well be contrived in this form.

Trochisci suaveolentes.

Sweet-ſmelling troches.

Take of
Strained ſtorax, one ſcruple;
Ambergris, fifteen grains;
Muſk, ſeven grains;
Oil of cinnamon, ſix drops;
Fine ſugar, one ounce.
Make them into ſmall troches with mucilage of gum Arabic.

CHAPTER III.

Pills.

TO this form are peculiarly adapted thoſe drugs which operate in a ſmall doſe; and whoſe nauſeous and offenſive taſte or ſmell require them to be concealed from the palate.

Pills diſſolve the moſt difficultly in the ſtomach, and produce the moſt gradual and laſting effects, of all the internal forms. This is in ſome caſes of great advantage; in others it is a quality not at all deſirable, and ſometimes may even be of dangerous conſequence; particularly with regard to emetics, which, if they paſs the ſtomach undiſſolved, and afterwards exert themſelves in the inteſtines, operate there as violent cathartics. Hence emetics are, among us, ſcarce ever given in pills. And hence to the reſinous and difficultly ſoluble ſubſtances, ſaponaceous ones ought to be added, in order to promote their ſolution.

Gummy reſins and inſpiſſated juices, are ſometimes ſoft enough to be made into pills, without addition. Where any moiſture is requiſite, ſpirit of wine is more proper than ſyrups or conſerves, as it unites more readily with them, and does not ſenſibly increaſe their bulk. Light, dry powders require ſyrup, or mucilages: and the more ponderous, as the mercurial and other metallic preparations, thick honey, conſerve, or extracts.

Light powders require about half their weight of ſyrup; and of honey, about three-fourths their weight; to reduce them into a due conſiſtence for forming pills. Half a dram of the maſs will make five or ſix pills of a moderate ſize.

General rules for making pills from the Edinburgh pharmacopœia.

I.

The three firſt rules, formerly laid down for making powders, are here alſo to be carefully obſerved.

II.

Gums and inſpiſſated juices, are to be firſt ſoftened with the liquid preſcribed: then add the powders, and continue beating them altogether till they are perfectly mixed.

III.

The maſſes for pills are beſt kept in bladders, which ſhould be moiſtened, now and then, with ſome of the ſame kind of liquid with which the maſs was made up, or with ſome proper aromatic oil.

PILULÆ AROMATICÆ.
Aromatic pills.
Lond.

Take of
- Socotorine aloes, an ounce and a half;
- Gum guaiacum, one ounce;
- Aromatic ſpecies,
- Balſam of Peru, each half an ounce.

Reduce the aloes and gum guaiacum ſeparately into powder, then mix them with the reſt, and make the whole into a maſs with a ſufficient quantity of ſyrup of orange peel.

It is ſomewhat difficult to unite theſe ingredients into a maſs fit for making pills. The beſt way is, to firſt rub the aromatic ſpecies with the balſam, then to add the powdered aloes, and afterwards the guaiacum. When theſe are well mixed together, drop in the ſyrup by little and little at a time. Theſe pills are contrived to ſupply the place of the Pilulæ diambræ of our former pharmacopœia. They are far more elegant as well as ſimple, truly uniform in their ingredients, and excellently adapted to the purpoſes they ſeem deſigned for. Taken in ſmall doſes, as half a ſcruple, or little more, and occaſionally repeated, they warm the ſtomach, and by degrees the whole habit, promote perſpiration, and all the natural ſecretions. If the doſe be conſiderable, they operate gently by ſtool: and, if continued for ſome time in ſmaller doſes, they prove at length purgative, or introduce a ſalutary looſeneſs.

PILULÆ ALOETICÆ.
Aloetic pills.
Edinb.

Take of
Socotorine aloes in powder,
Hard extract of gentian, each two ounces.
Make them into a maſs with ſimple ſyrup.

This compoſition has been in uſe for ſome time in the Edinburgh infirmary, as a deobſtruent in cachectic indiſpoſitions; and thence it is received into the pharmacopœia of the college. A ſcruple or half a dram of the maſs is directed to be made into pills of a moderate ſize for one doſe.

PILULÆ de JALAPPA.
Jalap pills.
Edinb.

Take of
Extract of jalap, two ounces;
Aromatic ſpecies, half an ounce;
Simple ſyrup, enough to make them into a maſs.

This compoſition alſo is now received into the pharmacopœia. One of the ſame kind, with powdered jalap in ſubſtance inſtead of the extract, is uſed in ſome of our hoſpitals, as a cheap and effectual purge.

PILULÆ E SCAMMONIO CUM ALOE.
Pills of ſcammony with aloes.

Take of
Socotorine aloes, one dram;
Aromatic ſpecies, half a dram;
Scammony, one ſcruple;
Soft extract of liquorice, as much as is ſufficient to reduce them into a maſs of a due conſiſtence for being formed into pills.

This warm purgative is recommended for removing the crudities, &c. after a ſurfeit or debauch, and for preventing arthritic and other complaints incident to thoſe who live high. The quantity above deſcribed may be made into thirty pills, of which five or ſix are to be taken for a doſe.

PILULÆ e COLOCYNTHIDE SIMPLICIORES.
The more ſimple colocynth pills.
Lond.

Take of
Pith of colocynth,
Scammony, each two ounces;
Oil of cloves, two drams.
Pulverize the coloquintida and ſcammony by themſelves, then mix

mix in the oil, and make the whole into a maſs with ſyrup of buckthorn.

The operator ſhould be careful, in pulverizing the colocynth, to avoid the finer particles that fly off from it; which, though they do not conſiderably affect the mouth or fauces, have ſometimes been obſerved to occaſion violent purging. The drug ſhould firſt be well dried, cut with a ſheers into ſmall pieces, and freed from the ſeeds. Then rub it in an oiled mortar, adding a few drops of ſweet oil occaſionally during the trituration: afterwards mix this powder with the powdered ſcammony, and the eſſential oil preſcribed, and make the mixture into a maſs, as before directed. The compoſition is apt to grow ſtiff and dry in keeping, and therefore ought to be made pretty ſoft at firſt. The pills ſhould be formed as they are wanted; for when long kept, they become ſo hard, as to have ſometimes paſſed through the inteſtines undiſſolved.

Theſe pills (formerly called Pilulæ de duobus, or pills of two ingredients) are very ſtrong cathartics, and ought not to be ventured upon in caſes where leſs violent medicines will take effect. They have been often made uſe of in large doſes, along with large doſes alſo of mercurials, in venereal complaints, both in recent gonorrhœas, and in the ſwellings and inflammations which ſometimes follow from the ſuppreſſion of the diſcharge; but in both theſe caſes they are apparently improper, as they generally injure the conſtitution, and as the latter complaint is for the moſt part aggravated by them. The eſſential oil, which is added as a corrector to the purgative ingredients, does not contribute ſo much, as is commonly ſuppoſed, to abate the roughneſs of their operation. The doſe of theſe pills is from fifteen grains to half a dram; ſome have imprudently gone as far as two ſcruples. Half a dram contains ten grains of coloquintida, and as much ſcammony.

PILULÆ COCCIÆ.

The pills called cochiæ.

Edinb.

Take of
- Coloquintida,
- Scammony,
- Socotorine aloes, each one ounce;
- Vitriolated tartar, two drams;
- Oil of cloves, one dram;
- Syrup of buckthorn, a ſufficient quantity.

Beat them into a maſs.

This compoſition, like the foregoing, is ſtrongly cathartic; not leſs effectual, though ſomewhat leſs irritating. Half a dram contains above ſix grains and a half of coloquintida, the ſame quantity of ſcammony, and the ſame of aloes.

PILULÆ ex COLOCYNTHIDE cum ALOE.

Colocynth pills with aloes.

Lond.

Take of
- Socotorine aloes,
- Scammony, each two ounces;
- Pith of colocynth, one ounce;
- Oil of cloves, two drams.

Let the dry ſpecies be ſeparately reduced into powder; then mix in the oil, and make the whole into a maſs with ſyrup of buckthorn.

By the diminution of coloquintida in this preſcription, the ingredients are reduced to the proportions wherein they are ſet down in the original of Galen; and what is of greater conſequence, the medicine becomes leſs ungrateful to the ſtomach, and leſs virulent in its operation. Half a dram of the maſs contains nearly four grains of coloquintida, eight of aloes, and eight of ſcammony.

PILULÆ ECPHRACTICÆ.

Deobſtruent pills.

Lond.

Take of the
- Aromatic pills, three ounces;
- Rhubarb,
- Extract of gentian,
- Salt of ſteel, each one ounce;
- Salt of wormwood, half an ounce.

Beat them together into a maſs, with ſolutive ſyrup of roſes.

It is difficult to bring this maſs into the due conſiſtence, the two ſalts acting upon one another, ſo as to make it ſwell and crumble. Notwithſtanding the alkaline ſalt employed, the pill does not prove at all alkaline; for the acid of the ſalt of ſteel forſakes its metal, and unites with the alkali, into a vitriolated tartar; whence ſome have propoſed uſing, inſtead of the two ſalts here directed, an ounce of vitriolated tartar already made, and half an ounce of any of the calces of iron. This they obſerve prevents the inconveniency above-mentioned, without making any apparent alteration in the quality of the medicine.

PILULÆ ECPHRACTICÆ CHALYBEATÆ.

Chalybeate ecphractic pills.

Lond.

Take of
- The maſs of common pills, called Rufus's pills, deſcribed hereafter, one ounce and a half;
- Gum ammoniacum,
- Reſin of guaiacum, each half an ounce;
- Salt of ſteel, five drams;
- Syrup of orange-peel, as much as is ſufficient to reduce the whole into a maſs.

The ſalt of ſteel, which is one of the moſt active preparations of that metal, remains here undecompounded. Both theſe and the foregoing pills are very well calculated for anſwering the intention expreſſed in the title. A dram of the maſs may be made into twelve pills, and two or three of theſe taken every night, or oftener, in chlorotic, or other caſes, where warm, aperient, or deobſtruent medicines are proper.

PILULÆ ECPHRACTICÆ PURGANTES.

Purging deobſtruent pills.

Edinb.

Take of
- Socotorine aloes,
- Extract of black hellebore,
- Scammony, each one ounce;
- Gum ammoniacum,
- Reſin of guaiacum, each half an ounce;
- Vitriolated tartar, two drams;
- Eſſential oil of juniper berries, one dram.

Beat them into a maſs, with a ſufficient quantity of ſyrup of buckthorn.

This compoſition may be given, from eight or ten grains to a ſcruple or half a dram, according as it is intended to keep the belly open or to purge. Half a dram of the maſs contains about ſix grains of each of the capital purgative ingredients: aloes, ſcammony, and extract of hellebore.

PILULÆ FŒTIDÆ.

Fetid pills.

Edinb.

Take of
- Aſafetida,

Ruſſian caſtor, each one dram and a half;
Camphor, half a dram;
Oil of hartſhorn, twenty-four drops.

Beat the camphor with the aſafetida, then add the caſtor and oil of hartſhorn, and make the whole into a maſs.

PILULÆ GUMMOSÆ.

Gum pills.

Lond.

Take of
Galbanum,
Opoponax,
Myrrh,
Sagapenum, each one ounce;
Aſafetida, half an ounce.

Make them into a maſs with ſyrup of ſaffron.

Edinb.

Take of
Aſafetida,
Galbanum,
Myrrh, each one ounce;
Oil of amber, rectified, one dram.

Make them into a maſs with ſimple ſyrup.

All theſe pills are deſigned for antihyſterics and emmenagogues, and very well calculated for anſwering thoſe intentions: half a ſcruple, a ſcruple, or more, may be taken every night or oftener. The fetid pills of our former pharmacopœias were conſiderably purgative. The purgative ingredients are now omitted, as the phyſician may eaſily, in extemporaneous preſcription, compound theſe pills with cathartic medicines, in ſuch proportions as particular caſes ſhall require.

The following compoſitions are calculated for the ſame intentions as the foregoing deobſtruent, fetid, and gum pills.

Take of 1.
Aſafetida,
Wood-ſoot,
Myrrh, each two ounces;
Oil of amber, one dram and a half;
Syrup of ſugar, a ſufficient quantity.

Mix and make them into a maſs, according to art.

Take of 2.
Aſafetida, one dram;
Martial flowers, half a dram;
Oil of amber, eight drops;
Balſam of Peru, a ſufficient quantity to reduce them into a maſs.

Take of 3.
Aſafetida,
Gum ammoniacum,
Myrrh,
Aloes,
Ruſt of ſteel prepared,
Extract of gentian, each one ſcruple;
Syrup of ginger, as much as will make the other ingredients into a maſs.

Take of 4.
Galbanum, one dram;
Salt of ſteel, half a dram;
Aſafetida,
Aromatic ſpecies, each one ſcruple;
Tincture of myrrh, as much as will make them into a maſs.

In hyſterical diſorders, after bleeding and purging, where a ſanguine and plethoric habit indicates theſe evacuations, chalybeate medicines are in general the moſt to be relied upon; eſpecially when joined, as in theſe compoſitions, with bitters and deobſtruent gums. At firſt taking, they are apt to increaſe the complaints (as the experienced Sydenham obſerves), and occaſion great diſorders both of body and mind; which, however, ſoon go off, or may be relieved by a proper doſe of opium given at bed-time. A dram of either of the maſſes is to be made into twelve pills, one or two of which may be taken for a doſe, twice or thrice a day.

PILULÆ MERCURIALES.

Mercurial pills.

Edinb.

Take of
Quickſilver,
Honey, of each one ounce;
Crumb of bread, two ounces.

Rub the quickſilver with the honey in a glaſs mortar, till the mercurial globules ceaſe to appear, adding a little ſimple ſyrup occaſionally; afterward put to it the crumb of bread, and with a little water beat it into a maſs, and form it immediately into four hundred and eighty pills.

Lond.

Take of
Quickſilver, five drams;
Straſburgh turpentine, two drams;
Cathartic extract, four ſcruples;
Rhubarb, powdered, one dram.

Grind the quickſilver with the turpentine, until they are perfectly incorporated; then let the other ingredients be beaten up with this mixture into a maſs. If the turpentine happen to be too thick, ſoften it with a little oil olive.

PILULÆ MERCURIALES LAXANTES.

Laxative mercurial pills.

Edinb.

Take of
Pure quickſilver, one ounce;
Reſin of guaiacum,
Extract of black hellebore,
Powdered rhubarb, each half an ounce;
Common ſyrup, a ſufficient quantity.

Grind the quickſilver with the reſin of guaiacum, until they are perfectly incorporated; then add the other ingredients, and beat the whole into a maſs according to art.

The three foregoing compoſitions are uſeful mercurial pills; the firſt as an alterative, the other two as purgative mercurials. They are all, however, liable to an inconvenience; uncertainty in regard to their ſtrength. For the mercury is but looſely united with the other ingredients, and very apt to ſeparate and run together in its original form, in which ſtate it never exerts its proper virtue. Though it appears perfectly extinguiſhed by the matters it is ground with at firſt, part of it is apt to be ſpued out on beating up the mixture with the other ingredients into a maſs.

PILULÆ de GAMBOGIA.

Gamboge pills.

Edinb.

Take of
Socotorine aloes,
Extract of black hellebore,
Gamboge,
Mercurius dulcis, each two drams;
Eſſential oil of juniper berries, half a dram;
Syrup of buckthorn, a ſufficient quantity.

Beat them into a maſs.

This is a ſtrong mercurial purgative, in which the mercurial preparation is not liable to the uncertainty with which the crude quickſilver is accompanied in the foregoing compoſitions. The doſe is from ten or fifteen grains to half a dram. This laſt quantity contains of aloes, extract of hellebore, gamboge, and mercurius dulcis, about five grains each.

PILULÆ ÆTHIOPICÆ.

Ethiopic pills.

Edinb.

Take of
- Quickſilver, ſix drams;
- Honey, half an ounce;
- Precipitated ſulphur of antimony,
- Gum guaiacum powdered, of each half an ounce.

Rub the quickſilver with the honey in a glaſs mortar, till the mercurial globules ceaſe to appear; afterwards add the ſulphur of antimony and guaiacum, and make it into a maſs with the mucilage of gum Arabic.

These pills are much more efficacious than thoſe of a former edition; the ethiops mineral, there ordered, being exchanged for a more active compoſition. In their preſent form, they reſemble Dr. Plummer's pills, deſcribed in the Edinburgh eſſays, to which they are preferable in one reſpect, that they are leſs apt to run off by ſtool. They are an uſeful alterative both in cutaneous and venereal diſorders. One fourth part of the quantity above preſcribed may be made into ſixty pills; of which, from one to four may be taken every night and morning, the patient keeping moderately warm during the whole time that this courſe is continued.

I ſhall here inſert ſome other formulæ of mercurial pills, which may be occaſionally had recourſe to, and of which the greater part has been kept as ſecrets in particular hands.

Take of 1.
- Crude quickſilver,
- Hard extract of guaiacum, each one dram and a half;
- Eſſential oil of ſaſſafras, twenty drops;
- Venice turpentine, a ſufficient quantity.

Grind the quickſilver with the turpentine, till they are perfectly incorporated. Then add the other ingedients, and reduce the whole into an uniform maſs; which is to be made into forty pills. Two, three, or more of theſe, may be taken for a doſe.

Take of 2.
- Mercurius dulcis,
- Prepared chalk, each one ſcruple;
- Mucilage of gum Arabic, a ſufficient quantity.

Make them into twelve pills, of which the doſe is from one to three.

Take of 3.
- Mercurius dulcis, half a ſcruple;
- Softer extract of guaiacum, one dram;
- Eſſential oil of ſaſſafras, ten drops.

Mix, and make them into a maſs, for twenty pills; the doſe of which is from one to ſix.

Take of 4.
- Mercurius dulcis, half a ſcruple;
- Camphor, half a dram;
- Soft extract of guaiacum, as much as is ſufficient to make them into a maſs, which is to be formed into twenty pills: the doſe is from one to ſix.

Take of 5.
- Mercurius dulcis, half a ſcruple;
- Venice turpentine, as much as will reduce it into a maſs of a proper conſiſtence; which is to be formed into five pills, for as many doſes.

Take of 6.
- Calcined mercury, commonly called præcipitate per ſe,

Thebaic extract, each two grains;
Balſam of Peru, as much as will make them into a maſs; which is to be formed into two pills, for two doſes.

Take of 7.
Turbith mineral, two ſcruples;
Thebaic extract, one ſcruple;
Mucilage of gum Arabic, as much as is ſufficient to reduce them into a maſs, which is to be formed into twenty pills, for as many doſes.

The *mercurius corallinus* may be made into pills in the ſame manner, and taken in the ſame doſe.

Take of 8.
Mercurius dulcis, half a ſcruple;
Crude antimony, finely levigated, one dram;
Conſerve of orange-peel, as much as will reduce them into a maſs.

This is to be formed into ten pills. The doſe is from one to three.

Take of 9.
Mercurius dulcis,
Precipitated ſulphur of antimony, each five grains;
Socotorine aloes, fifteen grains;
Balſamic ſyrup, a ſufficient quantity to reduce them into a maſs; which is to be made into five pills, for as many doſes.

The method of managing theſe mercurial medicines, as alteratives, is, to give ſmall doſes every morning and evening; and rather prolong the time of continuing their uſe, than increaſe the doſe. The patient ought to keep warm, and drink of warm diaphoretic liquors; as infuſion of ſaſſafras, decoction of the woods, the ſimple or compound lime water, &c.

PILULÆ PACIFICÆ.

The pacific pills, commonly called Mathews's pills.

Take of
Gum ammoniacum, three ounces;
Ruſſian caſtor, two ounces;
Engliſh ſaffron,
Opium, each one ounce;
Common ſyrup, as much as is ſufficient.

Mix, and make them into a maſs, according to art.

These pills are contrived by a chemical empiric, Starkey, and communicated by him to Mathews, under whoſe name they were once greatly celebrated. The form here given differs from the original in omitting a ſmall portion of black hellebore, an ingredient of no great ſervice; for though this article, as the London committee obſerves, might perhaps promote a ſtool the day after the medicine is taken, that advantage, in caſes which require it, may with greater certainty be obtained by more obvious means.

Soap of tartar, as it is called, another ingredient in the original, on which the contriver of the compoſition laid no ſmall ſtreſs, and which the Edinburgh college retained in former editions, is here, without any injury to the medicine, exchanged for an equal quantity of ammoniacum. Nor indeed are any of the ingredients of much conſequence, except the opium: their quantity being too inconſiderable to anſwer any uſeful purpoſe. Eight grains of the compoſition contain nearly one of opium.

PILULÆ SAPONACEÆ.

Saponaceous pills.

Lond.

Take of
Almond ſoap, four ounces;

Strained opium, half an ounce;
Eſſence of lemons, one dram.

Soften the opium with a little wine, and then beat it with the reſt, until they are perfectly mixed.

This pill is introduced in the room of Mathews's. The ſoap promotes the ſolution of the opium in the ſtomach, and thus occaſions it to act the more quickly; which is the only intention that the more laborious ſoap of tartar can anſwer. The eſſence of lemons gives an agreeable flavour, makes the medicine ſit eaſier on the ſtomach, and prevents a nauſea, which it would otherwiſe be apt to occaſion. Ten grains of the pill contain nearly one grain of opium.

PILULÆ e STYRACE.

Storax pills.

Lond.

Take of
Strained ſtorax, two ounces;
Saffron, one ounce;
Strained opium, five drams.

Beat them together till perfectly united.

These are contrived for diſſolving more ſlowly in the ſtomach than the ſaponaceous or Mathews's pills, and conſequently for producing more gradual and laſting effects. One grain of opium is contained in five grains and four-fifths of a grain of the maſs.

PILULÆ ex OLIBANO.

Olibanum pills.

Edinb.

Take of
Olibanum, two ounces;
Myrrh, one ounce;
Opium, five drams;
Balſam of Peru, two drams;
Common ſyrup, a ſufficient quantity.

Make them into a maſs, which ſupplies the place of the ſtorax pills.

PILULÆ PECTORALES.

Pectoral pills.

Edinb.

Take of
Gum ammoniacum, half an ounce;
Balſam of Tolu, two drams;
Flowers of benzoine,
Engliſh ſaffron, each one dram;
Common ſyrup, a ſufficient quantity.

Make them into a maſs according to art.

This compoſition is very well contrived for promoting expectoration, and may be uſefully given in common colds, and in difficulty of breathing proceeding from viſcid phlegm: the doſe is from ſix or eight grains to a ſcruple or more. It is here conſiderably improved. The balſam of Tolu is introduced in the room of myrrh, the flowers of benzoine for benzoine in ſubſtance, and aniſated balſam of ſulphur, which encumbered the old form, is omitted. Here it may be obſerved, that though ſeveral compoſitions be denominated pectorals, they are nevertheleſs in virtue very diſſimilar. Thus the pectoral decoction, the ſyrup, and the troches, are calculated for ſoftening, lubricating, and incraſſating thin tickling humours; whilſt the pectoral pills, the elixir, and the oxymel, tend to ſtimulate and deterge the veſſels, and attenuate or diſſolve thick, tenacious juices.

PILULÆ RUFI.

Rufus's pills.

Lond.

Take of
Socotorine aloes, two ounces;
Myrrh,

Saffron, each one ounce.

Make them into a maſs with ſyrup of ſaffron.

PILULÆ COMMUNES, vulgo RUFI.

The common pills, vulgarly called Rufus's pills.

Edinb.

Take of

Socotorine aloes, two ounces;
Myrrh, one ounce;
Saffron, half an ounce.

Beat them into a maſs with a proper quantity of common ſyrup.

THE virtues of this medicine may be eaſily underſtood from its ingredients. See *Elixir proprietatis.* The pills, given to the quantity of half a dram or two ſcruples, prove conſiderably cathartic, but they anſwer much better purpoſes in ſmaller doſes as laxatives or alteratives.

PILULÆ STOMACHICÆ.

Stomachic pills.

Edinb.

Take of

Rhubarb, one ounce;
Socotorine aloes, ſix drams;
Myrrh, half an ounce;
Vitriolated tartar, one dram;
Eſſential oil of mint, half a dram;
Syrup of orange-peel, a ſufficient quantity.

Make them into a maſs.

THIS pill is intended for moderately warming and ſtrengthening the ſtomach, and evacuating crude viſcid humours. A ſcruple of the maſs may be taken twice a day.

PILULÆ SCILLITICÆ.

Squill pills.

Take of

Spaniſh ſoap, one ounce;
Gum ammoniacum,
Millepedes prepared,
Freſh ſquills, each half an ounce;
Balſam of Copaiba, as much as is ſufficient.

Reduce them into a maſs according to art.

THIS is an elegant and commodious form for the exhibition of ſquills, whether for promoting expectoration, or in the other intentions to which that medicine is applied. As the virtue of the compound is chiefly from the ſquills, the other ingredients are often varied in extemporaneous preſcription. The ſoap is commonly omitted, as being of no great uſe in the quantity that goes to a doſe of the compoſition; and other powders, as the leſſer cardamom ſeeds, are ſubſtituted for the millepedes, whoſe virtues, in ſuch ſmall doſes, are very inſignificant.

Agreeably to theſe remarks in a former edition of this work, the college of Edinburgh has now given the following improvement of this compoſition.

Take of

Gum ammoniacum,
Leſſer cardamom ſeeds, in powder,
Extract of liquorice, of each one dram;
Squills, dried, and finely powdered, one ſcruple.

Mix them well together, and make them into a maſs with ſimple ſyrup.

PILULÆ AD DYSENTERIAM.

Pills againſt the dyſentery.

Take of

Yellow wax, half an ounce;
Spermaceti,
Japan earth, each one dram;
Oil of cinnamon, twelve drops.

Make them into a maſs.

THIS medicine has often been of great benefit for the purpoſe expreſſed in its title, at the ſame time ſtrengthening the inteſtines, and covering them with a ſoft mucus, which defends them from being irritated by the acrimony of the humours. Each half dram of the maſs may be formed into five or ſix pills for one or two doſes.

PILULÆ PICEÆ.

Tar pills.

Take any quantity of tar, and mix with it as much powdered elecampane root as will reduce it to a proper thickneſs for being formed into pills.

THE powder here mixed with the tar, though of no great virtue, is a very uſeful addition, not only for procuring it a due conſiſtence, but likewiſe as it divides the reſinous texture of the tar, and thus contributes to promote its ſolution by the animal juices. In the Edinburgh infirmary, half a dram of the maſs, made into middle-ſized pills, is given every morning and evening, in diſorders of the breaſt, ſcurvies, &c.

PILULÆ ROBORANTES.

Strengthening pills.

1.

Take of
Hard extract of Peruvian bark, one dram;
Salt of ſteel, ten grains;
Oil of cinnamon, five drops;
Balſam of Peru, as much as will reduce them into a maſs.

2.

Take of
Olibanum, one dram;
Styptic powder, two ſcruples;
Salt of ſteel, one ſcruple;
Syrup of ſugar, a ſufficient quantity to make them into a maſs.

IN a lax ſtate of the fibres, debilities of the nervous ſyſtem, and ſome decays of conſtitution, the firſt of theſe compoſitions is an effectual ſtrengthener and reſtorative. If the quantity preſcribed be made into twenty pills, one or two of theſe may be taken for a doſe, and repeated twice a day. The other is a ſtronger ſtyptic, and is uſed for reſtraining immoderate alvine evacuations, and ſanguineous or ſerous diſcharges from the remoter parts.

3.

Take of
Aromatic ſpecies,
Extract of gentian, each one dram;
Extract of Peruvian bark, half a dram;
Elixir of aloes, as much as will reduce them into a maſs.

THESE pills are ſerviceable for warming and ſtrengthening a weak cold ſtomach, expelling flatulencies, and promoting digeſtion. If ten pills be made out of a dram of the maſs, two may be taken thrice a day, about an hour before meals.

PILULÆ E SPERMATE CETI.

Spermaceti pills.

Take of
Spermaceti, one dram;
White ſugar-candy in powder, two drams;
Balſamic ſyrup, as much as is ſufficient.

Grind the ſpermaceti with the ſugar, till they are perfectly mixed; then, adding the ſyrup, rub them with a warm peſtle into an uniform maſs.

WHERE ſpermaceti cannot be commodiouſly exhibited in any other form, three or four moderate-ſized pills, made from this maſs, may be taken two or three times a day, in eroſions of the viſcera by acrimonious humours, tickling coughs, and ſimilar diſorders.

CHAPTER IV.

Boluſes.

BOLUSES differ little in conſiſtence from electaries, being only ſomewhat ſtiffer, ſo as to retain their figure without ſpreading or falling flat.

This form is very convenient for the exhibition of the more powerful medicines, which require their doſe to be exactly adjuſted, as the ſtronger alexipharmacs, cathartics, and opiates. As boluſes are chiefly intended for immediate uſe; volatile ſalts, and other materials, which if the maſs were to be kept, would exhale or ſwell it, are frequently admitted into them.

The quantity of a bolus very ſeldom exceeds a dram. If the ingredients be of the lighter kind, even this will be too bulky to be commodiouſly ſwallowed.

The lighter powders are made up with ſyrup; a ſcruple or twenty-ſix grains of the powder, with as much ſyrup as will bring it to a due conſiſtence, makes a bolus ſufficiently large.

The more ponderous powders, as the mercurial ones, are commonly made up with conſerve: ſyrups ſcarce holding them together. For the teſtaceous powders alſo an addition of conſerve is uſed; though if made up with this alone, they would be too bulky.

Both the light and ponderous powders may be conveniently made up with mucilage, which increaſes the bulk leſs than the other additions, and occaſions them to paſs down more freely.

The officinal pharmacopœias have no formula of this kind: moſt of the following compoſitions are taken from our hoſpitals.

BOLUS ALEXIPHARMACUS.
Alexipharmac bolus.

Take of 1.
Compound powder of contrayerva, half a ſcruple;
Syrup of wild poppies, a ſufficient quantity to make it into a bolus.

2.
Take of
Contrayerva root, half a ſcruple;
Syrup of ſaffron, as much as is ſufficient.
Make them into a bolus.

3.
Take of
Virginian ſnakeroot, half a ſcruple;
Confection of kermes, as much as is ſufficient.
Mix and make them into a bolus.

4.
Take of
Virginian ſnakeroot,
Contrayerva root, each eight grains;
Saffron, three grains;
Syrup of meconium, a ſufficient quantity to reduce them into a bolus.

5.
Take of
Virginian ſnakeroot, fifteen grains;
Caſtor, ten grains;
Syrup of ſugar, as much as is ſufficient.
Mix and make them into a bolus.

6.
Take of
Camphor, two grains;
Saffron five grains;
Cordial confection, one ſcruple.
Mix and make them into a bolus.

7. Take

7.

Take of
- Camphor, two grains;
- Nitre,
- Contrayerva root, each ten grains;
- Syrup of clove july-flowers, as much as will make them into a bolus.

8.

Take of
- Muſk, ten grains;
- Cordial confection, one ſcruple.

Make them into a bolus.

9.

Take of
- Muſk, ten grains;
- Salt of hartſhorn, or of ſal ammoniac, five grains;
- Thebaic extract, half a grain;
- Syrup of ſaffron, a ſufficient quantity.

Make them into a bolus.

These boluſes are deſigned for low depreſſed fevers, in which medicines of this kind are generally preſcribed, for keeping up the vis vitæ, raiſing the pulſe, and promoting a diaphoreſis. The compoſitions differ in ſtrength, nearly according to the order in which they ſtand. The two laſt are of great power, and are deſigned chiefly for caſes accompanied with convulſive ſymptoms, which are often abated by them.

Bolus ex alumine.
Alum bolus.

Take of
- Alum,
- Extract of Peruvian bark,
- Nutmeg, each ten grains;
- Simple ſyrup, as much as will reduce them into a proper conſiſtence for a bolus.

This compoſition is a very ſtrong aſtringent, and is uſed with ſucceſs in violent uterine hæmorrhages, and other immoderate ſecretions which require to be ſpeedily reſtrained. It may be taken twice a day; or if the flux be very violent, every four or ſix hours, till it abate.

Bolus e camphora.
Camphor bolus.

Take of
- Camphor, half a ſcruple;
- Gum Arabic, half a dram;
- Syrup of marſhmallows, a ſufficient quantity to make them into a bolus.

This is a very convenient form for the exhibition of camphor: this drug, however, when thus given by itſelf in large doſes, is apt to nauſeate the ſtomach; and rarely has ſo good effects as when mixed in ſmall quantities with nitre or ſimilar ſubſtances, and frequently repeated.

Bolus e castoreo.
Caſtor bolus.

Take of
- Caſtor, one ſcruple;
- Salt of hartſhorn, five grains; or oil of hartſhorn, five drops;
- Simple ſyrup, a ſufficient quantity.

Make them into a bolus.

This medicine is given in hyſterical and hypochondriacal diſorders, and likewiſe as an alexipharmac in fevers. Its virtues, which are great and unqueſtionable, ſeem to depend more upon the fetid animal oil, or volatile ſalt, than on the drug from which it takes its name.

Bolus catharticus.
Purgative bolus.

Take of 1.
- Rhubarb, half a dram;
- Solutive ſyrup of roſes, a ſufficient

cient quantity to make a bolus.

2.

Take of
Jalap, one ſcruple;
Jamaica pepper,
Cryſtals of tartar, each five grains;
Syrup of buckthorn, as much as will reduce them into a maſs of a due conſiſtence.

3.

Take of
Scammony, ten grains;
Soluble tartar, one ſcruple;
Soft extract of liquorice, a ſufficient quantity.

Let the ſcammony be well ground with the ſoluble tartar, then add the extract, and make them into a bolus.

4.

Take of
Gamboge,
Cryſtals of tartar, each eight grains;
Syrup of ginger, a ſufficient quantity to reduce them into a bolus.

5.

Take of
Elaterium, two grains;
Extract of jalap, half a ſcruple;
Cryſtals of tartar, one ſcruple;
Syrup of orange peel, a ſufficient quantity to make them into a bolus.

The virtues of theſe compoſitions are ſufficiently obvious; the firſt is a mild purgative; the two laſt too ſtrong to be in general ventured on; and the other two of intermediate degrees of ſtrength.

Bolus catharticus cum mercurio.

Purgative bolus with mercury.

1.

Take of
Jalap, one ſcruple;
Mercurius dulcis, five grains;
Solutive ſyrup of roſes, as much as is ſufficient to make them into a bolus.

2.

Take of
Gamboge, ſeven grains;
Mercurius dulcis,
Aromatic ſpecies, each half a ſcruple;
Syrup of buckthorn, a ſufficient quantity to make a bolus.

The firſt of theſe compoſitions is a ſafe and mild mercurial cathartic: the ſecond is too ſtrong for general uſe.

Bolus diaphoreticus.

Diaphoretic bolus.

Take of
Compound powder of contrayerva,
Crude ſal ammoniac, each one ſcruple;
Simple ſyrup, a ſufficient quantity to form them into a bolus.

This bolus is given in fevers, and other caſes where a diaphoreſis is to be promoted. Sal ammoniac is for this purpoſe one of the moſt efficacious of the neutral ſalts. It requires, however, when thus given in a ſolid form, to be aſſiſted by warm diluents, frequently repeated; which not only promote its action, but likewiſe prevent its ſitting uneaſy on the ſtomach.

Bolus diureticus.

Diuretic bolus.

Take of
Freſh ſquills, ſix grains;
Compound powder of arum, ten grains;
Ginger, five grains;
Syrup of orange peel, a ſufficient quantity.

Make them into a bolus.

This compoſition is recommended by Dr. Mead, to be taken every morning in hydropic caſes, for promoting urine. He obſerves, that in theſe diſorders, diuretic medicines vary greatly in their effects, thoſe which anſwer ſufficiently in one perſon, failing in another; and that the ſquill and its preparations are of all others thoſe which moſt generally ſucceed.

BOLUS AD DYSENTERIAM.

Bolus againſt the dyſentery.

Take of
The cordial confection,
French bole, each one ſcruple;
Thebaic extract, one grain.
Make them into a bolus.

This compoſition is excellently well calculated for the purpoſe expreſſed in its title. Dr. Mead aſſures us, that he has never found any medicine more effectual, either for reſtraining the flux, or healing the exulcerated membranes. Previouſly to the uſe of this or other like medicines, the firſt paſſages muſt be cleanſed by mild emetics and cathartics, as ipecacuanha and rhubarb.

BOLUS EMMENAGOGUS.

Emmenagogue bolus.

Take of 1.
Socotorine aloes, eight grains;
Saffron, four grains;
Guinea pepper, two grains;
Oil of ſavin, two drops;
Conſerve of rue, as much as is ſufficient to reduce them into a due conſiſtence.

Take of 2.
Salt of ſteel, one grain;
Myrrh, half a ſcruple;
Cordial confection, fifteen grains.
Make them into a bolus.

Take of 3.
Black hellebore root, eight grains;
Freſh ſquills, four grains;
Eſſential oil of pepper-mint, two drops;
Conſerve of orange-peel, as much as is ſufficient to make them into a bolus.

All theſe are medicines of great power for promoting or exciting the menſtrual flux. The two firſt are calculated for lax phlegmatic habits; the third, for perſons of a ſanguine temperament, where chalybeate medicines cannot be borne.

BOLUS FEBRIFUGUS.

Febrifuge bolus.

Take of
Peruvian bark, one ſcruple;
Caſcarilla, half a ſcruple;
Mucilage of quince ſeeds, a ſufficient quantity to make them into a bolus.

This elegant compoſition is excellently well adapted to the cure of intermittent fevers; and may be given in caſes where the Peruvian bark by itſelf would be leſs proper. Where aromatics, chalybeates, bitters, &c. are alſo requiſite, they are either to be premiſed, or occaſionally interpoſed.

BOLUS HYSTERICUS.

Hyſteric bolus.

Take of
Muſk,
Aſafetida, each ſix grains;
Caſtor, half a ſcruple;
Syrup of ſaffron, as much as is ſufficient to make them into a bolus.

This medicine is very well contrived for the purpoſe expreſſed in its title. It is of great ſervice both in hyſterical and hypochondriacal diſorders; and often gives relief in the depreſſions, faintings, flatulent colics, head-achs, and other ſymptoms, attending them. It may be taken twice a day, along with any ſuitable liquor.

BOLUS ILIACUS.

Iliac bolus.

Take of
  Cathartic extract, one ſcruple;
  Thebaic extract, one grain.
Make them into a bolus.

THIS bolus is preſcribed by Dr. Mead, for eaſing the pain, and procuring ſtools, in the iliac paſſion, and dry belly-ach; where the irritating cathartics, exhibited by themſelves, are thrown up by vomit. The uſe of this medicine is to be preceded by plentiful bleeding, and accompanied with purgative glyſters of the more acrid kind; and its operation promoted by infuſion of ſena, mixed with a little of the elixir ſalutis, or tincture of ſena.

BOLUS MERCURIALIS.

Mercurial bolus.

Take of
  Calomel, from five to fifteen grains;
  Conſerve of roſes, half a dram.
Mix and make them into a bolus.

THIS bolus is given every night, or oftener, for raiſing a ſalivation, in venereal, and other diſorders, which require that herculean operation. It is likewiſe taken at night as an alterative, to be carried off next morning by a cathartic. Mercurials exhibited in this manner, have generally better effects than when joined with purgatives directly.

BOLUS MERCURIALIS EMETICUS.

Emetic mercurial bolus.

Take of
  Yellow emetic mercury, ſix grains;
  Conſerve of roſes, a ſufficient quantity.
Make them into a bolus.

THIS ſtrong emetic is given in venereal and leprous diſeaſes; particularly in the caſe of foul ulcers of long ſtanding, the cleanſing and cure of which are frequently promoted by it. The violence of its operation limits its uſe to robuſt conſtitutions.

BOLUS PECTORALIS.

Pectoral bolus.

Take of
  Spermaceti, fifteen grains;
  Gum ammoniacum, ten grains;
  Salt of hartſhorn, five grains;
  Simple ſyrup, as much as is ſufficient.
Mix and make them into a bolus.

IN colds of long ſtanding, old coughs, aſthmas, and beginning conſumptions, this bolus generally gives relief; eſpecially if bleeding be premiſed, and repeated, if neceſſary, at proper intervals.

BOLUS RHEI CUM MERCURIO.

Bolus of rhubarb with mercury.

Take of
  Choice rhubarb, twenty-five grains;
  Calomel, five grains;
  Simple ſyrup, as much as will form them into a bolus.

THIS is a very mild mercurial purgative. It is given to deſtroy worms, and in cachectic, chlorotic, and ſimilar diſorders.

BOLUS RHEUMATICUS.

Rheumatic bolus.

Take of

Extract of guaiacum, half a dram;
Salt of hartſhorn, ſeven grains;
Simple ſyrup, a ſufficient quantity.
Make them into a bolus.

In chronical rheumatiſms, whether the remains of a rheumatic fever, or a continuation of pains that proceeded at firſt from neglected colds, this bolus has been given with good effects, once a week or oftener: the patient keeping warm, and drinking warm liquors, to promote its operation as a cathartic and diaphoretic. Its uſe ought to be accompanied by venæſection, which is to be repeated every eight or ten days as long as the blood is ſizy. This medicine is likewiſe exhibited in ſciatic, arthritic, and other pains not accompanied with a ſizineſs of blood. In theſe it much more frequently fails than in the true rheumatiſm.

BOLUS SCILLITICUS.

Scillitic bolus.

Take of
Freſh ſquills, twelve grains;
Aromatic ſpecies, half a ſcruple;
Oil of pepper-mint, one drop.
Beat them well together into an uniform maſs, of a due conſiſtence for a bolus.

This is a warm, ſtimulating, and attenuating medicine, and may be given to great advantage in caſes where the natural ſecretions are obſtructed or ſuppreſſed from a viſcidity or ſluggiſhneſs of the juices. The efficacy of the ſquills is promoted by the additional ingredients, which at the ſame time warm and ſtrengthen the ſtomach and inteſtines, and prevent the compoſition from being thrown up by vomit, which this quantity of ſquills, given by itſelf, would in many conſtitutions be.

BOLUS THERIACALIS.

Treacle bolus.

Take of
Theriaca, two ſcruples;
Salt of hartſhorn, ſeven grains
Camphor, three grains.
Mix and form them into a bolus.

Camphor and ſalt of hartſhorn, when thus joined with opiates, have in many caſes better effects than if exhibited by themſelves, their diaphoretic virtue being greatly promoted by the relaxation which the opium occaſions. The quantity of theriaca in this bolus contains ſomewhat more than a quarter of a grain of opium.

BOLUS SUDORIFICUS.

Sudorific bolus.

Take of
Camphor, five grains;
Thebaic extract, one grain;
Syrup of orange peel, a ſufficient quantity to reduce them into a bolus.

This medicine is one of the moſt effectual ſudorifics, generally exciting a copious ſweat. In many caſes, where this intention is to be anſwered, whether acute or chronical, it may be given to great advantage.

BOLUS TEREBINTHINATUS.

Turpentine bolus.

Take of
Chio turpentine, one ſcruple;
Powdered liquorice, a ſufficient quantity.
Make them into a bolus.

This is a convenient form for the exhibition of turpentine, the liquorice powder anſwering the ſame intention here as the elecampane root in the *pilulæ piceæ*.

CHAPTER V.

Electaries.

ELECTARIES are compoſed chiefly of powders mixed up with ſyrups, &c. into ſuch a conſiſtence, that the powders may not ſeparate in keeping, that a doſe may be eaſily taken up on the point of a knife, and not prove too ſtiff to ſwallow.

Electaries receive chiefly the milder alterative medicines, and ſuch as are not ungrateful to the palate. The more powerful drugs, as cathartics, emetics, opiates, and the like (except in officinal electaries to be diſpenſed by weight) are ſeldom truſted in this form, on account of the uncertainty of the doſe; diſguſtful ones, acrids, bitters, fetids, cannot be conveniently taken in it; nor is the form of an electary well fitted for the more ponderous ſubſtances, as mercurials, becauſe they are apt to ſubſide in keeping, unleſs the compoſition be made too ſtiff.

The lighter powders require thrice their weight of honey, or ſyrup boiled to the thickneſs of honey, to make them into the conſiſtence of an electary; of ſyrups of the common conſiſtence, twice the weight of the powders is ſufficient.

Where the common ſyrups are employed, it is neceſſary to add likewiſe a little conſerve, to prevent the compound from drying too ſoon. Electaries of Peruvian bark, for inſtance, made up with ſyrup alone, will often in a day or two grow too dry for taking.

Some powders, eſpecially thoſe of the leſs grateful kind, are more conveniently made up with mucilages than with ſyrups, honey, or conſerve. The three laſt ſtick about the mouth and fauces, and thus occaſion the taſte of the medicine to remain for a conſiderable time; whilſt mucilages paſs freely, without leaving any taſte in the mouth. A little ſoft extract of liquorice, joined to the mucilage, renders the compoſition ſufficiently grateful, without the inconveniencies of the more adheſive ſweets.

The quantity of an electary directed at a time, in extemporaneous preſcription, is rarely leſs than an ounce, or more than three ounces.

General rules for making electaries.

I.

The rules already laid down for decoctions and powders in general, are likewiſe to be obſerved in making decoctions and powders for electaries [*E.*]

II

Gums, inſpiſſated juices, and ſuch other ſubſtances as are not pulverable, ſhould be diſſolved in the liquor preſcribed: then add the powders by little and little, and keep the whole briſkly ſtirring, ſo as to make an equable and uniform mixture [*E.*]

III.

Aſtringent electaries, and ſuch as have pulps of fruits in their compoſition, ſhould be prepared only ly in ſmall quantities at a time [*E.*]

For aſtringent medicines loſe greatly of their virtue, on being kept in this form; and the pulps of fruits are apt to become ſour.

IV.

The ſuperfluous moiſture of the pulps ſhould be exhaled over a gentle fire, before the other ingredients are added to them [*E.*]

V.

Electaries, if they grow dry in keeping, are to be reduced to the due conſiſtence, with the addition of a little Canary wine; [*L. E.*] and not with ſyrup or honey. By theſe means, the doſe will be the leaſt uncertain; a circumſtance deſerving particular regard, in thoſe eſpecially which are made up with ſyrup, and contain a large quantity of opium, as the *confectio Paulina*, and *philonium* [*L.*]

ELECTARIUM ad DYSENTERICOS.

Antidyſenteric electary.

Edinb.

Take of
- Japonic confection, two ounces;
- Locatelli's balſam (beaten up with a ſufficient quantity of yolk of eggs) one ounce;
- Powdered rhubarb, half an ounce;
- Syrup of marſhmallows, a ſufficient quantity.

Mix and make them into an electary.

This compoſition is extremely well contrived for the purpoſe expreſſed in its title. Aſtringents or opiates by themſelves rarely have place in dyſenteries, even after the firſt paſſages have been evacuated by an emetic or a full doſe of rhubarb. They eaſe the pain and moderate the flux for a time, but the ſhort relief is apt to be followed by dangerous or even fatal conſequences from the retention of the acrid and corrupted humours. The rhubarb, which the college of Edinburgh has now added from the practice of the infirmary, in good meaſure prevents this accumulation, without much counteracting the ſalutary effects of the other materials. In many caſes, however, it may be ſtill neceſſary to interpoſe that laxative drug by itſelf. The doſe of the electary is the bulk of a large nutmeg, once or twice a day, according to the urgency of the ſymptoms. One dram contains about one-ſixth part of a grain of opium.

ELECTARIUM e BACCIS LAURI.

Electary of bay-berries.

Lond.

Take of
- Rue leaves dried,
- Caraway ſeeds,
- Parſley ſeeds,
- Bay-berries, each one ounce;
- Sagapenum, half an ounce;
- Black pepper,
- Ruſſian caſtor, each two drams;
- Clarified honey, thrice the weight of the powdered ſpecies.

Mix the ſpecies with the honey, and make them into an electary.

This compoſition is ſometimes taken, in flatulent colics and hyſterical diſorders, from a ſcruple to two drams. But its principal uſe is in carminative glyſters, nor is it often employed in theſe. The college of Edinburgh have entirely dropt it.

ELECTARIUM e CASIA.

Electary of caſia.

Lond.

Take of
- Solutive ſyrup of roſes,
- Pulp of caſia, freſh extracted, each half a pound;
- Manna, two ounces;
- Pulp of tamarinds, one ounce.

Grind the manna in a mortar, and, with a gentle heat, diſſolve it in the ſyrup; then add the pulps, and continue the heat until the whole is reduced to a due conſiſtence.

DIACASSIA.

Edinb.

Take of
- Pulp of caſia, ſix ounces;
- Tamarinds,
- Manna, of each one ounce and a half;
- Syrup of damaſk roſes, ſix ounces.

Rub the manna with the ſyrup, in a warmed mortar, and add the pulps, ſo as to make the whole into an electary.

THESE compoſitions are very convenient officinals, to ſerve as a baſis for purgative electaries, and ſimilar purpoſes; as the pulping of a ſmall quantity of the fruits, for extemporaneous preſcription, is ſufficiently troubleſome: the tamarinds give them a pretty taſte, and do not ſubject them, as might be expected, to turn ſour: after ſtanding for four months, the compoſition was found no ſourer than when firſt made up. They are likewiſe uſefully taken by themſelves, in the quantity of two or three drams occaſionally, for gently looſening the belly in coſtive habits.

ELECTARIUM LENITIVUM.

Lenitive electary.

Lond.

Take of
- Figs, one pound;
- Sena, eight ounces;
- Pulp of tamarinds,
- Pulp of caſia,
- Pulp of French prunes, each half a pound;
- Coriander ſeeds, four ounces;
- Liquorice, three ounces;
- Double refined ſugar, two pounds and a half.

Pulverize the ſena along with the coriander ſeeds, and ſift out ten ounces of the powder. The remainder is to be boiled with the figs and liquorice, in four pints of water, to one half; then ſtrain and preſs out the liquor, and evaporate it to the weight of a pound and a half, or ſomewhat leſs. In this diſſolve the ſugar, ſo as to make it into a ſyrup, and add this ſyrup, by little and little, to the pulps; laſtly, mix in the powder before ſeparated by the ſieve.

Edinb.

Take of
- Pulp of French prunes, one pound;
- Caſia,
- Tamarinds, of each two ounces and a half;
- Melaſſes, one pound and a half;
- Sena, finely powdered, four ounces;
- Coriander ſeeds, finely powdered, half an ounce.

Boil the pulps with the melaſſes to the thickneſs of honey, and add the powders, and mix them well together into an electary.

THESE electaries may be occaſionally taken to the quantity of a nutmeg or more, for looſening the belly in coſtive habits. They are likewiſe frequently employed in clyſters for the ſame purpoſe.

ELECTARIUM PECTORALE.

Pectoral electary.

Edinb.

Take of
- Rob of elder-berries, two ounces;
- Spermaceti diſſolved in a ſufficient quantity of yolk of eggs, half an ounce;
- Flowers of benzoine, one dram;
- Balſamic ſyrup, as much as is ſufficient to make the other ingredients into an electary.

This is a very uſeful medicine, in tickling coughs and common colds, calculated both to obtund acrimony and promote expectoration. It may be uſed two or three times a day, in doſes of about the quantity of a ſmall nutmeg. Taken to the bulk of a large nutmeg, at bed-time, it generally, not only relieves the breaſt, but tends to procure a ſalutary diaphoreſis or ſweat in the night. It is here improved from former editions, by ſubſtituting rob of elder-berries for conſerve of roſes, and ſpermaceti for compound powder of gum tragancanth.

ELECTARIUM e SCAMMONIO.

Electary of ſcammony,

Lond.

Take of
- Scammony, an ounce and a half;
- Cloves,
- Ginger, each ſix drams;
- Eſſential oil of caraway ſeeds, half a dram;
- Honey, half a pound.

Let the ſpices be ground together, and mixed with the honey; then add the powdered ſcammony, and afterwards the oil.

This electary is a warm, briſk purgative. It is a reform of the *electarium caryocoſtinum* of our preceding diſpenſatories, a compoſition which was greatly complained of, as being inconvenient to take, on account of the largeneſs of its doſe. A dram and a half of this, which contains fifteen grains of ſcammony, is equivalent to half an ounce of the other.

ELECTARIUM e SCORDIO.

Electary of ſcordium, commonly called Diaſcordium.

Lond.

Take of
- The ſpecies of ſcordium with opium, any quantity;
- Syrup of meconium, boiled to the conſiſtence of honey, thrice as much by weight.

Mix the ſpecies with the ſyrup, ſo as to make an electary.

In our former diſpenſatories, the ſpecies were ordered to be made up with honey. This is now exchanged for a ſyrup, more agreeable to the intention of the medicine, which is that of an opiate aſtringent, whilſt honey is manifeſtly aperient and detergent. It is not perhaps neceſſary, for the purpoſes of the ſhops, to make the ſpecies into an electary at all. By keeping in this form, the ingredients loſe much of their aromatic flavour and aſtringency, becoming ſoft and ſmooth upon the palate; and the red colour, imparted by the bole, decays. The London college have therefore very juſtly ordered them to be kept in powder as well as in an electary; and directed the powder both with and without opium, for different occaſions. See *Species e ſcordio*, and *Pulvis e bolo*, *cum* and *ſine opio*. Either of theſe powders may be made up extemporaneouſly into an electary, with any ſyrup that ſhall be judged proper.

Diaſcordium was intended by its author Fracaſtorius for an antipeſtilential; but we have been ſo happy as to have little occaſion for medicines in that intention; nor could this be anywiſe depended on. It is a moderately warm aſtringent and opiate; and in this light only is conſidered by the preſent practice. One grain of opium is contained in nine ſcruples of the electary.

The *ſpecies e ſcordio*, which make the baſis of this electary, contain, as we have already ſeen, ſeveral ſuperfluous ingredients; for though the London college has given a judicious reformation of the powder, under the title of *Pulvis e bolo*, the electary is made with the powder unreformed; partly, that no material alteration might be made in a medicine, which is ſo much depended on, and whoſe effects have been ſo long experienced; and partly becauſe the phyſician, if he prefer the *pulvis e bolo*, may direct an electary to be made with it in extemporaneous preſcription. In the Edinburgh pharmacopœia, this medicine is not ordered to be kept in powder, but the electary is reformed to a great degree of elegance and ſimplicity. And as the ingredient from which it received its name, being a very unimportant one, is now omitted, the compoſition is diſtinguiſhed by another title, viz.

CONFECTIO JAPONICA.

Japonic confection.

Edinb.

Take of

Japan earth, four ounces;
Gum kino, three ounces;
Cinnamon,
Nutmeg, of each one ounce;
Opium, diſſolved in a ſufficient quantity of white wine, one dram and a half;
Syrup of dry roſes, boiled to the conſiſtence of honey, two pounds and a quarter.

Mix, and make an electary.

BALSAMUM LOCATELLI.

Locatelli's balſam.

Lond.

Take of

Oil olive, one pint;
Straſburgh turpentine,
Yellow wax, each half a pound;
Red ſaunders, ſix drams.

Melt the wax over a gentle fire, with ſome part of the oil: then add the reſt of the oil, and the turpentine; afterwards mix in the ſaunders, and keep them ſtirring together, until the mixture grow cold.

Edinb.

Take of

Yellow wax, one pound;
Oil olive, a pint and a half;
Chio or Straſburgh turpentine, a pound and a half;
Balſam of Peru, two ounces;
Dragons blood, in powder, one ounce.

Melt the wax in the oil over a gentle fire, then add the turpentine; and, having taken them from the fire, mix in the balſam of Peru and dragons blood, keeping them continually ſtirring till grown cold.

Dragons blood gives a more elegant colour to this compoſition than red ſaunders, though on another account it is ſomewhat leſs proper, having been found, when diſſolved in oil, to communicate ſome degree of heat and pungency, qualities quite foreign to the intention of the medicine. This balſam is uſed in internal bruiſes and hæmorrhages, eroſions of the inteſtines, dyſenteries, and in ſome kinds of coughs and aſthmas. The doſe is from two ſcruples to two drams. It may be commodiouſly taken with about double its weight of conſerve of roſes, as directed hereafter. Some have likewiſe applied it externally, for deterging and incarnating recent wounds and ulcers.

BALSAMUM CEPHALICUM.

Cephalic balſam.

Edinb.

Take of
  Expreſſed oil of nutmegs, one ounce;
  Diſtilled oil of cloves,
    of lavender,
    of roſemary, each half a dram;
    of amber, half a ſcruple;
  Balſam of Peru, one dram.

Liquefy the oil of nutmegs in a ſilver veſſel: and, when taken from the fire, mix into it the diſtilled oils and the balſam, according to art.

THIS medicine is recommended to be rubbed on the temples, and on paralytic limbs, for warming the part and comforting the nerves; and to be ſmelt to, for refreſhing and enlivening the ſpirits. Some have alſo given it inwardly as a warm cordial, in languid caſes, and in debilities of the nervous ſyſtem. There are abundance of preparations of this kind in foreign pharmacopœias, compoſed each of only one eſſential oil, incorporated with the expreſſed oil of nutmegs; which laſt is to be previouſly freed from its flavour (by diſtillation with water) that the ſmell of the former may not be injured thereby. In the room of this prepared ſebaceous matter, a mixture of white wax and oil olive might be uſed. In the *practical chemiſtry*, a general proceſs is given for the making of theſe kinds of preparations, under the title of

BALSAMUM ODORIFERUM.

An odoriferous balſam.

Take of
  Oil olive,
  White bees wax, each two ounces.

Put the oil into a China baſon, placed in a pan of boiling water, and ſlice the wax into it. Stir them together with a clean knife, or ſmall ſpatula, till the wax is melted: then remove the veſſel out of the hot water, and when the matter begins to thicken, drop in four drams of any odoriferous eſſential oil, as that of cinnamon, nutmegs, mace, lemon-peel, rhodium, lavender, roſemary, &c. or of a mixture of two or three of the oils; to which may be added one dram of eſſence of ambergris, which will heighten the ſmell of the oils without communicating any of its own. Keep the whole conſtantly ſtirring, that they may be perfectly mixed; and as ſoon as this is done, plunge the veſſel into cold water, to prevent the diſſipation of the eſſential oils.

THESE kinds of balſams may be made of any colour, ſo as to reſemble in this reſpect alſo, as well as in ſmell, the vegetable, from which the eſſential oil, you make uſe of, was drawn. A little of the pigment, called by the painters ſap-green, being previouſly ground with the oil olive, will give a fine green; a little cinnabar, a ſcarlet; turmeric, a lemon colour; Pruſſian blue, a violet; and cochineal, a fine purpliſh hue.

CONFECTIO PAULINA.

The confection called Paulina.

Lond.

Take of

Coſtus, or in its ſtead zedoary,
Cinnamon,
Long pepper,
Black pepper,
Storax, } ſtrained,
Galbanum, } ſtrained,
Opium, } ſtrained,
Ruſſian caſtor, each two ounces;
Simple ſyrup, boiled to the conſiſtence of honey, thrice the weight of the other ingredients.

Warm the ſyrup, and carefully mix with it the opium, firſt diſſolved in wine: gradually add this mixture, whilſt it continues warm, to the ſtorax and galbanum previouſly melted together; and afterwards ſprinkle in the other ſpecies reduced into powder.

This is the CONFECTIO ARCHIGENIS of a former diſpenſatory, brought back to its firſt form and author. It is a warm opiate medicine, and is ſometimes made uſe of in practice. Thirty-two grains contain one grain of opium.

MITHRIDATIUM, ſive CONFECTIO DAMOCRATIS.

Mithridate, or the confection of Damocrates.

Lond.

Take of

Cinnamon, fourteen drams;
Myrrh, eleven drams;
Agaric,
Indian nard,
Ginger,
Saffron,
Seeds of mithridate muſtard,
Frankincenſe,
Chio turpentine, each ten drams;
Camels' hay,
Coſtus, or, in its ſtead, zedoary,
Indian leaf, or, in its ſtead, mace,
Stechas,
Long pepper,
Hartwort ſeeds,
Hypociſtis,
Storax, ſtrained,
Opopanax,
Galbanum, ſtrained,
Opobalſam, or, in its ſtead, expreſſed oil of nutmegs,
Ruſſian caſtor, each one ounce;
Poley mountain,
Scordium,
Carpobalſam, or, in its ſtead, cubebs,
White pepper,
Candy carrot ſeed,
Bdellium, ſtrained, each ſeven drams;
Celtic nard,
Gentian root,
Dittany of Crete,
Red roſes,
Macedonian parſley ſeed,
Leſſer cardamom ſeeds, huſked,
Sweet fennel ſeed,
Gum Arabic,
Opium, ſtrained, each five drams;
Calamus aromaticus,
Wild Valerian root,
Aniſeed,
Sagapenum, ſtrained, each three drams;
Meum athamanticum,
St. John's wort,
Acacia, or, in its ſtead, terra Japonica,

Bellies of ſkinks, each two drams and a half;
Clarified honey, thrice the weight of all the other ingredients.

Warm the honey, and mix with it the opium diſſolved in wine; melt the ſtorax, galbanum, turpentine, and opobalſam (or expreſſed oil of nutmegs) together in another veſſel, continually ſtirring them about, to prevent their burning. With theſe ſo melted mix the hot honey, at firſt by ſpoonfuls, and afterwards in larger quantities at a time. When the whole is grown almoſt cold, add by degrees the other ſpecies reduced into powder.

THERIACA ANDROMACHI.

Venice treacle.

Lond.

Take of
Troches of ſquills, half a pound;
Long pepper,
Opium, ſtrained,
Vipers dried, each three ounces;
Cinnamon,
Opobalſam, or, in its ſtead, expreſſed oil of nutmegs, each two ounces;
Agaric,
Florence orris root,
Scordium,
Red roſes,
Navew ſeeds,
Extract of liquorice, each an ounce and a half;
Indian nard,
Saffron,
Amomum,
Myrrh,
Coſtus, or, in its ſtead, zedoary,
Camels hay, each one ounce;
Cinquefoil root,
Rhubarb,
Ginger,
Indian leaf, or, in its ſtead, mace,
Dittany of Crete,
Horehound leaves,
Calamint leaves,
Stechas,
Black pepper,
Macedonian parſley ſeed,
Olibanum,
Chio turpentine,
Wild valerian root, each ſix drams;
Gentian root,
Celtic nard,
Spignel,
Poley mountain }
St. John's wort } leaves,
Groundpine }
Germander tops, with the ſeed,
Carpobalſam, or, in its ſtead, cubebs,
Aniſeed,
Sweet fennel ſeed,
Leſſer cardamom ſeeds, huſked,
Biſhops weed }
Hartwort } ſeeds,
Treacle muſtard }
Hypociſtis,
Acacia, or, in its ſtead, Japan earth,
Gum Arabic,
Storax, ſtrained,
Sagapenum, ſtrained,
Terra Lemnia, or, in its ſtead, bole armenic or French bole,
Green vitriol calcined, each half an ounce;
Small (or, in its ſtead, the long) birthwort root,
Leſſer centaury tops,
Candy carrot ſeed,
Opopanax,
Galbanum, ſtrained,
Ruſſian caſtor,
Jews pitch, or, in its ſtead, white amber prepared,
Calamus aromaticus, each two drams;
Clarified honey, thrice the weight of all the other ingredients.

Let theſe ingredients be mixed together, after the ſame manner as directed in making the mithridate.

These celebrated electaries are almoſt the only remains, which the late reformation has left in the ſhops, of the wild exuberance of compoſition, which the ſuperſtition of former ages brought into vogue. The theriaca is a reformation of mithridate, made by Andromachus, phyſician to Nero. The mithridate itſelf is ſaid to have been found in the cabinet of Mithridates king of Pontus. The firſt publiſhers of this pompous arcanum were very extravagant in their commendations of its virtues; the principal of which was made to conſiſt in its being a moſt powerful preſervative againſt all kinds of venom. Whoever took a proper quantity in a morning, was enſured from being poiſoned during that whole day. This was confirmed by the example of its ſuppoſed inventor, who, as Celſus informs us, was by its conſtant uſe ſo fortified againſt the commonly reputed poiſons, that none of them would have any effect upon him when he wanted their aſſiſtance. But the notions of poiſons, which prevailed in thoſe ruder ages, were manifeſtly erroneous. Before experience had furniſhed mankind with a competent knowledge of the powers of ſimples, they were under perpetual alarms from an apprehenſion of poiſons, and buſied themſelves in contriving compoſitions which ſhould counteract their effects; accumulating together all thoſe ſubſtances which they imagined to be poſſeſſed of any degree of alexipharmac power. Hence proceed the voluminous antidotes which we meet with in the writings of the ancient phyſicians. Yet it does not appear, that they were acquainted with any real poiſon, except the cicuta, aconitum, and bites of venomous beaſts; and to theſe they knew of no antidote whatever. Even admitting the reality of the poiſons, and the efficacy of the ſeveral antidotes ſeparately, the compoſitions could no more anſwer the purpoſes expected from them, than the accumulating of all the medicinal ſimples into one form could make a remedy againſt all diſeaſes.

Yet notwithſtanding the abſurdity in the original intention of theſe medicines, and their enormity in point of compoſition; as they contain ſeveral powerful materials, whoſe virtues, though greatly prejudiced, yet are not deſtroyed, by their multiplicity and contrariety; the compounds have been found, from repeated experience, to produce very conſiderable effects, as warm opiate diaphoretics.

Theſe compoſitions might without doubt be lopt of numerous ſuperfluities, without any diminution of their virtues. Yet, as the effects of them, in their preſent form, are well known, ſo much regard has been paid to ancient authority, as not to attempt a reformation of that kind. The London college has however thought proper to retrench, from forms originally complex, all ſubſequent additions that have crept into them. Neither the deſcription in verſe of the elder Andromachus, nor the proſe explanation of the younger, make any mention of the white pepper afterwards added to the theriaca; and the orris root, in the mithridate of a former pharmacopœia, is alſo a ſupernumerary ingredient, not warranted by the original: theſe therefore are rejected. Nor is the aſarum in mithridate grounded on any good authority:

thority: the verſe it is taken from, is mutilated and corrupt; and the word which ſome, upon conjecture only, ſuppoſe to have been aſarum, others, alſo upon conjecture, chuſe to read differently. Till ſome emendation ſhall be better founded than merely upon critical gueſſes, this ſingle ſpecies may be ſafely paſſed over, without any prejudice to the medicine. None of the ancient deſcriptions afford any other light in this particular; for they either omit this ingredient, and others alſo, or abound with additions.

One innovation in both theſe medicines, the college has allowed themſelves. In each of theſe compoſitions are found both cinnamon and caſia lignea; and it is very evident, from ſeveral parts of Galen's works, that the latter was uſed by the ancients only upon account of the great difficulty of procuring the other; ſo that to retain the caſia, now that cinnamon is ſo common, is a blind following of theſe writers, without any attention to their meaning. The caſia therefore is now rejected, and half the quantity of cinnamon put in its room, which is the proportion that Galen directs to be obſerved in ſubſtituting the one for the other. It is probable, that the caſe is the ſame with regard to the Celtic and Indian nard; that the former had a place in theſe compoſitions, on account of the difficulty of procuring the Indian; for Galen expreſsly prefers the latter.

There is a material error in regard to the theriaca, which has paſſed through moſt of the editions of our pharmacopœia. This is, the ſubſtituting of Roman vitriol to the ancient chalcitis, now not certainly known, and in the catalogue of ſimples, deſcribing the Roman to be a blue vitriol; whereas the Italian writers are unanimous it is a green vitriol; and were it not, it would not anſwer to the effects of the chalcitis, which was certainly a chalybeate, and gives the medicine its black colour. What has chiefly occaſioned chalcitis to be ſuppoſed a cupreous vitriol, ſeems to be its name, derived from χαλκὸς, copper. But it is to be obſerved, that all vitriols were formerly imagined to proceed from copper, and were named accordingly. The green or martial vitriols are ſtill called by the Germans *kupfferwaſſer*, and by us *copperas*. It is probable, that the ancient chalcitis was no other than a native martial vitriol, calcined by the heat of thoſe warm climates, to a degree of yellowiſh red or coppery colour: and therefore the common green vitriol, thus calcined by art, very properly ſupplies its place.

The London college has likewiſe ſomewhat facilitated the preparation of theſe medicines, by omitting the *trochiſci cypheos* uſed in the mithridate, and the *hedychroi* and *viperini* for the theriaca; and inſerting their ingredients, after *Zwelffer*'s manner, in the compoſitions they are intended for. This is done in the theriaca very commodiouſly, the ingredients in theſe troches uniting with thoſe in the theriaca itſelf, into unbroken numbers. But to render the numbers equally ſimple in the mithridate, it was neceſſary to retrench a few odd grains from ſome of the articles, and make a ſmall addition to ſome others. They adjuſted the proportions of the ingredients in the *trochiſci cypheos* from the original deſcription in Galen; the numbers in our former pharmacopœia being very erroneous.

The college of Edinburgh, paying

ing very little deference to antiquity or common prejudice, has ventured at length to diſcard theſe venerable reliques; and has ſubſtituted in their room an elegant and ſimple form, equivalent to them both in efficacy, under the title of

THERIACA EDINENSIS.

Edinburgh theriaca.

Edinb.

Take of
- Virginian ſnakeroot, ten ounces;
- Contrayerva root, ſix ounces;
- Reſin of guaicum, four ounces;
- Leſſer cardamom ſeeds, two ounces;
- Myrrh,
- Engliſh ſaffron,
- Opium, each one ounce;
- Rob of elder-berries, thrice the weight of the powders;
- Canary wine, as much as is ſufficient to diſſolve the opium.

Make them according to art into an electary.

This compoſition conſiſts of very powerful ingredients, and is doubtleſs capable of anſwering every thing that can be reaſonably expected from the more voluminous theriaca of Andromachus. The London college alſo had formerly their theriaca compoſed of the leſs exceptionable ingredients of Andromachus's. But as theſe medicines have for a long time been chiefly employed for external purpoſe, in the way of cataplaſm, the *theriaca Londinenſis* is now omitted, and its place ſupplied by a cataplaſm compoſed of a few well-choſen articles, under the name of *cataplaſma e cymino*, of which hereafter. For internal uſe, none of the theriacas are at preſent ſo much regarded as they have been heretofore; practitioners having introduced in their room, extemporaneous boluſes of Virginian ſnakeroot, camphor, contrayerva, and the like, which anſwer all their intentions; with this advantage, that they may be given either with or without opium, an ingredient which renders the others prejudicial in caſes where they might otherwiſe be proper.

With regard to the quantity of opium in the foregoing compoſitions, one grain thereof is contained in four drams of the mithridate; in three ſcruples, fifteen grains of the Venice treacle; and in five ſcruples of the *theriaca Edinenſis*. The proportion of opium will vary a little, according to the time that they have been kept; their moiſture by degrees exhaling, ſo as to leave the remainder ſtronger of the opium, than an equal weight was at firſt. A change of this kind is taken notice of by many writers, but falſely attributed to an imaginary fermentative quality of the ingredients; by which they were ſuppoſed, from their multiplicity and contrariety, to be continually exalting and improving the virtues of one another.

A good deal of care is requiſite in making theſe compoſitions, to prevent the waſte which is apt to happen in the pounding, and which would render the proportion of opium to the other ingredients precarious. The intention of diſſolving the opium in wine, for theſe and other electaries, is, that it may be more uniformly mingled with the reſt.

PHILONIUM LONDINENSE.

London philonium.

Lond.

Take of
- White pepper,
- Ginger,

Caraway ſeeds, each two ounces;
Strained opium, ſix drams;
Syrup of meconium, boiled to the conſiſtence of honey, thrice the weight of the other ingredients.

Heat the ſyrup, and carefully mix with it the opium, previouſly diſſolved in wine; then add the other ingredients, reduced into powder.

This is a reformation of the *philonium* deſcribed by Galen, which was received in our preceding pharmacopœias with the addition of ſome ſuperfluous ingredients, and diſtinguiſhed, but not very properly, by the epithet *Romanum*. The additional articles, and ſome unneceſſary ones that were in the original, are here omitted, and the quantities of the other varied, ſo as to preſerve the ſame proportion of opium to the whole, as in our laſt pharmacopœia. Thirty-ſix grains of the compoſition contain one grain of opium.

The mithridate, theriaca, diaſcordium, confectio Paulina, and philonium, are the only compoſitions now remaining, of what have been called the officinal capitals. They are all medicines of great power; and as, on the one hand, they are applicable, by the judicious phyſician, to excellent purpoſes, ſo on the other, their imprudent uſe has often been productive of miſchievous conſequences. It has been cuſtomary among nurſes, and others, to give diaſcordium to children, to eaſe their complaints, and to procure ſleep: intentions which it effectually anſwers, but at the ſame time never fails to bring on a coſtive habit, the foundation of many diſeaſes. This medicine has likewiſe been too unwarily given for reſtraining fluxes; whoſe ſuppreſſion was afterwards followed by more dangerous ſymptoms. The celebrated alexipharmics, mithridate, and theriaca, have oftentimes aggravated the diſorders they were intended to remedy, have converted a common cold into a high fever, have raiſed ſlight febrile complaints into a malignant fever. However ſtrongly therefore theſe kinds of medicines be recommended for eaſing pain, warming, promoting ſweat, expelling malignity, &c. the utmoſt caution is requiſite in the uſe of them. The caſes which demand their aſſiſtance, are much leſs frequent than is generally ſuppoſed.

ELECTARIUM ACIDUM.

Acid electary.

Take of
Conſerve of woodſorrel, one ounce;
Pulp of tamarinds, half an ounce;
Weak ſpirit of vitriol, as much as is ſufficient to give a grateful acidity;
Syrup of lemon juice, as much as will reduce the whole into the conſiſtence of a ſoft electary.

This grateful acid compoſition is an uſeful refrigerant and antiſeptic in different kinds of inflammatory and putrid diſorders.

ELECTARIUM ALEXETERIUM.

Alexeterial electary.

Take of
Confection of kermes, one dram;
Candied ginger, ſix drams;
Contrayerva root,
Virginian ſnakeroot, each one dram;
Syrup of orange peel, as much as is ſufficient to make the other ingredients into the conſiſtence of an electary.

This is a moderately warm elec

tary, contrived by Boerhaave for raiſing and recruiting the ſtrength in low fevers, where the pulſe is ſunk, and the patient languid and dejected. It may be taken to the quantity of a ſmall nutmeg every four or five hours, with any proper julep.

ELECTARIUM ALTERANS.
Alterative electary.

Take of
- Crude antimony, finely levigated, three drams;
- Reſin of guaiacum, two drams;
- Oil of ſaſſafras, ſix drops;
- Conſerve of red roſes, one ounce and a half;
- Balſamic ſyrup, as much as is ſufficient.

Grind the reſin and the levigated antimony well together; and, having mixed theſe with the oil (dropt on a little ſugar) and the conſerve, let the whole be ſoftened with the ſyrup into a due conſiſtence.

THIS medicine is uſed againſt cutaneous foulneſſes, obſtructions of the glands, and impurities of the blood and juices. Diſpenſatory writers in general lay the principal ſtreſs, in compoſitions of this kind, upon the calx, ceruſſe, or cinnabar of antimony; preparations which are far inferior to the crude mineral, and very ill deſerve the great character which has been uſually given of them. The bulk of a ſmall nutmeg of this electary may be taken every morning and evening with a little of the ſimple or compound lime-water.

ELECTARIUM ANTIEPILEPTICUM.
Antiepileptic electary.

Take of
- Peruvian bark, one ounce;
- Wild valerian root, two drams;
- Syrup of orange peel, a ſufficient quantity to reduce the others into an electary.

THIS medicine has been frequently preſcribed by Dr. Mead, in epileptic caſes, with ſucceſs. He directs one dram to be taken every morning and evening, for three months together; after which, to confirm the cure and prevent a relapſe, the ſame doſe is to be repeated, for three or four days, before every new and full moon for a conſiderable time.

ELECTARIUM ANTIDYSENTERICUM.
Antidyſenteric electary.

Take of
- Yellow wax, three drams;
- Spermaceti, two drams;
- Conſerve of red roſes, an ounce and a half;
- Oil of almonds, half an ounce;
- Balſamic ſyrup, a ſufficient quantity.

Let the wax and ſpermaceti be melted in the oil, over a gentle fire, and then mixed with the conſerve and ſyrup.

WHERE ſharp irritating humours have eroded the inteſtines, and laid open the mouths of the blood-veſſels, this ſoft healing electary is often of great uſe. It is ſaid that fluxes of long ſtanding, contracted in the Indies, which had yielded nothing to medicines of the reſtringent kind, have been removed by this, which ſupplies the natural mucus of the bowels that the flux has carried off, heals the excoriations, and obtunds the acrimonious humours.

ELECTARIUM AROMATICUM.
Aromatic electary.

Take of
- The aromatic ſpecies, one dram and a half;

Conſerve of lavender, two ounces;
Syrup of orange peel, a ſufficient quantity.
Make them into an electary.

This warm cordial medicine is of uſe in nervous complaints and decays of conſtitution. The bulk of a ſmall nutmeg may be taken two or three times a day with a glaſs of wine, or any other proper liquor, after it.

Electarium balsamicum.
Balſamic electary.

Take of
Conſerve of roſes, two ounces;
Locatelli's balſam, one ounce.
Diſſolve the balſam in the yolk of an egg, and then mix therewith the conſerve.

This electary is uſed in ſome coughs and diſorders of the breaſt; as alſo in the vomica, or ſuppuration in the ſtomach, which ſometimes happens after dyſenteries; and where there is an eroſion or rupture of the blood-veſſels, as in hæmoptoes. In theſe caſes, the bulk of a nutmeg may be taken for a doſe, twice or thrice a day.

Electarium chalybeatum.
Chalybeate electary.

Take of 1.
Salt of ſteel, one dram;
Candied nutmegs,
Candied ginger, each half an ounce;
Oil of cinnamon, five drops;
Conſerve of orange peel, one ounce;
Balſamic ſyrup, as much as is ſufficient to make them into an electary.

Take of 2.
Ruſt of ſteel, or ſteel prepared with ſulphur, ſix drams;
Candied ginger, one ounce;
Conſerve of orange peel, three ounces;
Syrup of orange peel, as much as will reduce them into a proper conſiſtence.

These elegant chalybeate medicines are given not only in cachectic and chlorotic caſes, and menſtrual obſtructions; but likewiſe in low hyſteric, and melancholic diſorders; and for warming and invigorating the habit in great debilities and decays of conſtitution. In either of theſe intentions, the bulk of a ſmall nutmeg is to be taken twice a day, and its effects promoted by moderate exerciſe.

Electarium deobstruens.
Deobſtruent electary.

Take of
Gum ammoniacum,
Hard ſoap, each a dram;
Powdered ſquills, one ſcruple;
Conſerve of orange peel, half an ounce;
Syrup of ginger, as much as is ſufficient to reduce the other ingredients into the conſiſtence of an electary.

Where the breaſt is oppreſſed by thick phlegm, or the viſcera obſtructed, this electary may be taken twice or thrice a day to the bulk of a ſmall nutmeg at a time. The quantity here preſcribed is ſufficient for ſix or eight doſes.

Electarium ad gonorrhoeam.
Electary for a gonorrhœa.

Take of 1.
Lenitive electary, three ounces;
Jalap, three drams;
Nitre, one dram and a half;
Simple ſyrup, a ſufficient quantity to make them into an electary.

Take

Take of 2.
Lenitive electary, three ounces;
Balſam of copaiva, one ounce and a half;
Rhubarb,
Gum guaiacum,
Nitre, each one ounce;
Syrup of orange peel, as much as will reduce them into a proper conſiſtence for an electary.

These compoſitions are ſaid to be uſed in ſome of the military hoſpitals; the firſt as a cooling laxative, for the inflammation and tenſion of the urinary paſſages, which always accompany a virulent gonorrhœa. In this intention, a dram and a half is directed to be taken every morning and evening. The ſecond is deſigned for ſtrengthening the parts after the virulence is expelled, and the heat and inflammation have ceaſed: the bulk of a nutmeg may be taken twice or thrice a day.

Electarium e gummi guaiaco.

Electary of gum guaiacum.

Take of
Gum guaiacum,
Compound powder of arum,
Canella alba, each ſix drams;
Conſerve of ſcurvy-graſs, two ounces;
Syrup of orange peel, as much as will bring them into a proper conſiſtence.

In chronical rheumatiſms, pains, and aches in general, that are not accompanied with inflammation, and ſome kinds of paralytic numbneſſes, this warm ſtimulating electary may be taken to the quantity of a nutmeg twice a day.

Electarium ex helleboro nigro.

Electary of black hellebore.

Take of
Black hellebore root,
Extract of ſavin,
Compound powder of myrrh, each half an ounce;
Canella alba, two drams;
Syrup of orange peel, as much as is ſufficient.
Mix and make them into an electary.

This electary is employed in one of our hoſpitals for promoting the natural evacuations from the uterus: for which purpoſe, it is undoubtedly a medicine of great power. It may be taken to the quantity of half a dram twice a day.

Electarium incraſſans.

Incraſſating electary.

Take of
Gum tragacanth,
Pulp of freſh comfry root, each one ounce;
Conſerve of mallows, half an ounce;
Syrup of marſhmallows, as much as is ſufficient to reduce the whole into the conſiſtence of an electary.

This electary is taken to the quantity of a cheſnut, three or four times a day, along with a milk diet, for incraſſating and obtunding thin ſerous humours, in hectic diſorders, in coughs proceeding from thin tickling rheums, and in fluxes and heat of urine, where the natural mucus of the parts is abraded.

ELECTARIUM AD NEPHRITICOS.

Nephritic electary.

Take of
- Lenitive electary, an ounce and a half;
- Venice turpentine, one ounce;
- Eggſhells prepared [or prepared oyſterſhells] half an ounce;
- Choice rhubarb, one dram;
- Syrup of marſhmallows, as much as is ſufficient.

Diſſolve the turpentine in the yolk of an egg, and then mix the whole together, according to art, ſo as to make thereof an electary.

THIS compoſition, taken from the Edinburgh infirmary, is contrived for cleanſing the urinary paſſages in nephritic diſorders. Turpentine, properly divided by earthy powders, is a ſafe, and, at the ſame time, one of the moſt powerful diuretics that can in theſe caſes be ventured on. The rhubarb and laxative electary are very uſeful additions; for the belly ought here to be always kept open, though the ſtronger purgatives are very improper. A dram of the electary may be taken once or twice a day, along with an infuſion of marſhmallow roots, ſweetened with a ſpoonful of honey.

ELECTARIUM PARALYTICUM.

Paralytic electary.

Take of
- Muſtard ſeed,
- Conſerve of roſemary tops, each one ounce;
- Compound ſpirit of lavender, two drams.

Beat the muſtard ſeed with a little water, that the pulp may be preſſed through a hair ſieve; then mix with it the conſerve and the ſpirit.

THIS is a very efficacious medicine for paralytic diſorders, tremors and numbneſs of the limbs, the decays accompanying old age, and in all caſes where the ſolids require to be ſtimulated, or ſluggiſh ſtagnant juices to be put in motion. It ought to be taken every morning and evening, or oftener, to the bulk of a large nutmeg; with a glaſs of rich wine, or any proper julep, after it.

ELECTARIUM E CORTICE PERUVIANO.

Electary of Peruvian bark.

Take of 1.
- Peruvian bark, three ounces;
- Caſcarilla, half an ounce;
- Syrup of orange peel, a ſufficient quantity.

2.

Take of
- Peruvian bark, three ounces;
- Virginian ſnakeroot, one ounce;
- Syrup of orange peel, a ſufficient quantity.

3.

Take of
- Peruvian bark, three ounces;
- Crude ſal ammoniac, three drams;
- Syrup of lemon juice, a ſufficient quantity.

4.

Take of
- Peruvian bark, three ounces;
- Colcothar of vitriol, ſix drams;
- Simple ſyrup, a ſufficient quantity.

5.

Take of
- Peruvian bark, three ounces;
- Alum, one ounce;
- Syrup of lemon juice, as much as is ſufficient.

6.

Take of
- Extract of Peruvian bark, one ounce;
- Extract of logwood,
- Extract of liquorice, each half an ounce;
- Mucilage of quince ſeeds, as much as is ſufficient to reduce the other ingredients into the conſiſtence of an electary.

ALL

All theſe compoſitions are very elegant and efficacious in the intentions for which they are deſigned. The firſt is calculated for common intermittent fevers, in the cure of which the virtues of the bark are greatly aſſiſted by the caſcarilla. The ſecond and third are given in thoſe intermittents, which happen in cachectic habits, and perſons ſubject to obſtructions of the viſcera, where the bark by itſelf, on account of its great aſtringency, would be prejudicial. The fourth is a good ſtrengthener in laxities of the ſolids and decays of conſtitution; and the fifth a powerful ſtyptic in fluxes and hæmorrhages, particularly in the diabetes and fluor albus. The bulk of a nutmeg of each may be taken at a time, and repeated according to the exigency of the caſe. The ſixth is a very agreeable form for the exhibition of Peruvian bark to thoſe who are more than ordinarily offended with its taſte; the ſubſtances here joined effectually covering its taſte, at the ſame time that they coincide with it in virtue. The compoſition is a very elegant and pleaſant one, and well deſerves a place in the ſhops. It may either be given in the form of a bolus or electary, in the doſe of a dram or more; or diſſolved in any ſuitable liquor into a draught.

Electarium purgans acidum.

An acid purgative electary.

Take of
Pulp of tamarinds, two ounces;
Cryſtals of tartar, two drams.
Make them into an electary.

This is an uſeful cooling laxative in hot bilious diſpoſitions, or inflammatory diſeaſes. The bulk of a nutmeg may be taken every hour, or oftener, till it begins to operate, or the ſame quantity may be taken once a day occaſionally in dry coſtive habits.

Electarium saponaceum.

Saponaceous electary.

Take of
Hard Spaniſh ſoap, two ounces;
Pareira brava, one ounce;
Rhubarb,
Gum of aloes, each three drams;
Syrup of orange peel, a ſufficient quantity.
Mix and make them into an electary.

This electary is calculated for jaundices ariſing from an obſtruction of the biliary ducts, or a viſcidity of the bile itſelf. Such are thoſe which moſt commonly occur, in which the ſtools are of a whitiſh or aſh-colour, and voided with difficulty. The doſe is from half a dram to a dram, twice a day. How far the pareira brava in this compoſition contributes to its virtues, I ſhall not take upon me to determine. Some have recommended this root, as a moſt powerful attenuant, in a great variety of diſorders, whilſt others look upon it as not ſuperior, if equal, to the common aperient roots. The ſenſible qualities of the pareira diſcover little foundation for the great character given of it; and a competency of fair trials of its virtue, is as yet wanting. The London college has not received it into their pharmacopœia.

Electarium sistens.

Binding electary.

Take of
The japonic confection, two ounces;
Extract of logwood, one ounce;
Syrup of dry roſes, as much as will reduce them into a proper conſiſtence for an electary.

THIS electary is calculated for the relief of dyſenteries, and other inteſtinal fluxes, after the acrid humours have been duly evacuated by mild cathartics, &c. The quantity of a nutmeg may be taken every four or five hours.

ELECTARIUM E SULPHURE.

Electary of ſulphur.

Take of
  Flowers of ſulphur, half an ounce;
  Lenitive electary, two ounces;
  Syrup of marſhmallows, a ſufficient quantity to make them into an electary.

THIS electary is deſigned againſt the piles, and generally diſtinguiſhed in the hoſpitals by the title of *electarium hæmorrhoidale.* Where the diſorder is accompanied with febrile or inflammatory ſymptoms, ſome nitre is occaſionally added, in the proportion of two drams, to the quantity here directed. It may be given from a dram to half an ounce at a time.

* * *

CHAPTER VI.

Lohochs.

A *Lohoch*, *eclegma*, *linctus*, or *lambative*, is a ſoft compound deſigned to be licked or ſlowly ſwallowed down, of a middle conſiſtence between a ſyrup and electary, at leaſt never ſo thin as the former, nor ſo thick as the latter.

Theſe preparations are generally compoſed of expreſſed oils, mixed with ſyrups, and ſimilar ſubſtances. In making them, the ſyrup is firſt to be mixed with a little ſugar, and then briſkly beaten up in a mortar, with the oil; which will thus readily incorporate, eſpecially if the ſyrup be of the acid kind. Two ounces of ſyrup, a dram of ſugar, and an ounce of expreſſed oil, form a linctus of a due conſiſtence; which may be made thicker at pleaſure by adding more oil, or thinner by an increaſe of the ſyrup.

Any oily ſubſtance, as Locatelli's balſam, ſpermaceti, &c. may likewiſe be reduced into this form: and inſtead of ſugar, powders more agreeable to the intention of emollients or pectorals, may be uſed; as the compound powder of gum tragacanth, or the white or black bechic troches of the ſhops. But the form at beſt is very unſightly and diſagreeable, and ſubſtances of this kind render it more ſo.

LOHOCH COMMUNE.

Common lohoch.

Edinb.

Take of

Freſh-drawn oil of almonds,
Syrup of marſhmallows, or balſamic ſyrup, each one ounce;
White ſugar, two drams.

Mix and make them into a lohoch.

LOHOCH EX AMYLO.

Starch lohoch.

Edinb.

Take of

Starch, two drams;
Japan earth, one dram;
Balſamic ſyrup,
Whites of eggs, beaten up into a thin fluid, each one ounce.

Mix and make them into a lohoch.

LOHOCH DE LINO.

Lohoch of linſeed.

Edinb.

Take of

Freſh-drawn linſeed oil,
Balſamic ſyrup, each one ounce;
Flowers of ſulphur waſhed,
White ſugar, each two drams.

Mix and make them into a lohoch.

LOHOCH DE MANNA.

Lohoch of manna.

Edinb.

Take of

Calabrian manna,
Freſh-drawn oil of almonds,
Syrup of violets, each equal parts.

Mix and make them into a lohoch.

LOHOCH SAPONACEUM.

Saponaceous lohoch.

Edinb.

Take of

Caſtile ſoap, one dram;
Oil of almonds, one ounce;
Syrup of lemon juice, one ounce and a half.

Mix and make them into a lohoch.

LOHOCH DE SPERMATE CETI.

Lohoch of ſpermaceti.

Edinb.

Take of

Spermaceti, two drams;

Freſh-drawn oil of almonds, half an ounce;

Balſamic ſyrup, one ounce.

Mix the ſpermaceti with a ſufficient quantity of yolk of eggs. Then add the oil and ſyrup, and make them into a lohoch.

LOHOCH BALSAMICUM.

Balſamic lohoch.

Take of

Spermaceti, two drams;

Balſam of Peru, one dram;

Syrup of marſhmallows, two ounces.

Let the ſpermaceti and balſam be well worked up with a ſufficient quantity of yolks of eggs; and then mix with them the ſyrup.

LINCTUS SOLUTIVUS.

Solutive lohoch.

Take of

Conſerve of hips, one ounce;

Solutive ſyrup of roſes,

Oil of olive, each four ounces.

Mix and make them into a lohoch.

The principal uſe of lohochs is in diſorders of the internal parts of the mouth, fauces, and œſophagus; as in aphthæ, and tickling coughs from defluxions in the firſt paſſages. For, however they may have been celebrated, under the vague appellation of pectorals, in affections of the breaſt and lungs, it is not to be expected, that their emollient lubricating quality can reach thoſe parts, or that they can give any relief in the true pulmonary cough. The ſlow manner in which they are ſwallowed down renders them well adapted to correct acrimony and irritation in the throat and about the mouth of the ſtomach; though the free uſe of ſuch unctuous compoſitions is ſoon liable to pall the appetite. Indeed the form is an inelegant one, and in the preſent practice is little regarded.

LINCTUS ACIDULUS.

Acidulous linctus.

Take of

Conſerve of red roſes, two ounces;

Weak ſpirit of vitriol, four ſcruples, or as much as is ſufficient to give a grateful acidity.

Mix them together.

THIS linctus is of a different nature from the foregoing preparations, and is uſed as a light reſtringent and detergent. It rather ſtrengthens than relaxes the ſtomach, is ſufficiently agreeable in taſte, and of a fine red colour.

CHAPTER VII.

Emulſions.

IN the foregoing chapter, oils were united with watery liquors, by the mediation of ſugar and ſyrups, into thick unctuous compounds. The preſent chapter contains mixtures of oily, reſinous, and ſimilar bodies, with water, in a liquid form, of a white colour reſembling milk, and hence called emulſions.

Emulſions have been generally prepared by grinding the oily ſeeds of plants, or kernels of fruits, along with common water, or any agreeable ſimple diſtilled water. In this proceſs, the oil of the ſubject is, by the mediation of the other matter, united with the aqueous fluid; and hence they poſſeſs ſome ſhare of the emollient virtue of the pure oil; with this advantage, that they are agreeable to the palate, and not apt to turn rancid or acrimonious by the heat of the body, which the pure oils in ſome inflammatory caſes may do.

Emulſions, beſides their uſe as medicines themſelves, are excellent vehicles for certain ſubſtances which cannot otherwiſe be ſo conveniently taken in a liquid form. Thus camphor, triturated with almonds, readily unites with water, into an emulſion, and in this form is conveyed into the remoteſt parts of the body, with ſufficient efficacy to anſwer intentions of moment, at the ſame time that its heat and pungency are ſoftened by the unctuoſity of the almonds.

Pure oils, balſams, reſins, and other ſimilar ſubſtances, are likewiſe rendered miſcible with water, into emulſions or milky liquors, by the intervention of mucilages. The white or yolk of an egg unites theſe bodies alſo with water, but leſs elegantly.

Several of the gummy reſins, as ammoniacum, galbanum, myrrh, and others, are reducible into emulſions by trituration with water alone; their reſinous part being rendered diſſoluble by the mediation of the gummy.

EMULSIO COMMUNIS.

Common emulſion.

Lond.

Take of
- Sweet almonds blanched, one ounce;
- Gum Arabic, half an ounce;
- Double-refined ſugar, ſix drams;
- Barley water, two pints.

Diſſolve the gum in the barley water warmed. As ſoon as the water is grown thoroughly cold, pour it by little at a time upon the almonds and ſugar, firſt beaten together, continuing to grind the whole, that the liquor may grow milky; after which, it is to be paſſed through a ſtrainer.

Edinb.

Take of
- Sweet almonds, one ounce;
- Bitter almonds, one dram;
- Water, two pounds and an half.

Blanch the almonds, and beat them in a ſtone mortar, and gradually pour upon them the water; and ſtrain off the liquor.

If, whilſt the almonds are beating, two ounces of mucilage of gum Arabic be added, the preparation is called EMULSIO ARABICA, *the Arabic emulſion.*

GREAT care ſhould be taken, that the almonds are not become rancid by keeping; which will not only render the emulſion extremely unpleaſant, a circumſtance of great conſequence in a medicine that requires to be taken in large quantities, but likewiſe give it injurious qualities little expected from preparations of this claſs. Theſe liquors are principally made uſe of for diluting and obtunding acrimonious humours; particularly in heat of urine and ſtranguries ariſing either from a natural ſharpneſs of the juices, or the operation of cantharides, or other irritating medicines. In theſe caſes, they are to be drunk frequently, in the quantity of half a pint or more at a time.

Some have ordered emulſions to be boiled, with a view to deprive them of ſome imaginary crudity; but by this proceſs they quickly ceaſe to be emulſions, the oil ſeparating from the water, and floating diſtinct upon the ſurface. Acids, and vinous ſpirits, produce a like decompoſition. On ſtanding alſo for ſome days, without addition, the oily matter ſeparates, and riſes to the top, not in its pure form, but in that of a thick cream. Theſe experiments prove the compoſition of the emulſions made from the oily ſeeds of kernels, and at the ſame time point out ſome cautions to be attended to in their preparation and uſe.

EMULSIO CAMPHORATA.

Camphorated emulſion.

Edinb.

Take of

Camphor, half a dram;
Sweet almonds, ſix in number;
White ſugar, half an ounce;
Simple pennyroyal water, half a pint.

Grind the camphor and almonds well together in a ſtone mortar, and add by degrees the pennyroyal water. Then ſtrain the liquor, and diſſolve in it the ſugar.

This is a very commodious form for the exhibition of camphor; the unctuous quality of the almonds in great meaſure covering its pungency. In fevers that require the aſſiſtance of this powerful diaphoretic drug, a ſpoonful of the emulſion may be taken every three or four hours.

LAC AMMONIACI.

Milk of ammoniacum.

Lond.

Take of

Gum ammoniacum, two drams;
Simple pennyroyal water, half a pint.

Grind the ammoniacum with the water, in a mortar, until the gum be diſſolved.

This liquor is employed for attenuating tough phlegm, and promoting expectoration, in the humoural aſthmas, coughs, and obſtructions of the viſcera. It may be given to the quantity of two ſpoonfuls twice a day.

EMULSIO PURGANS.

A purging emulſion.

Take of

Sweet almonds, blanched, two drams;
Fine ſugar, one dram;
Gum Arabic, half a dram;
Scammony, ten grains;
Simple cinnamon water, one ounce.

Diſſolve the gum in the cinnamon water, and, having ground the ſcammony with almonds and ſugar, pour on the liquor by little at a time, continuing to grind them together, ſo as to make them into an emulſion.

This emulſion is an agreeable and effectual purgative. It may be prepared with different proportions of the ſcammony, at pleaſure: other purgative reſins, as that of jalap, may be ſubſtituted to the ſcammony; a proper quantity of any ſyrup to the ſugar; and to the cinnamon water, any other ſimple water that may be more acceptable: but ſpirituous waters, for reaſons already mentioned, have no place. Some have employed an infuſion of liquorice, which appears to be a very proper addition in theſe kinds of preparations, as it coincides with the almonds in correcting the irritating power of the purgative material.

EMULSIO OLEOSA.
Oily emulſion.

Take of
Oil olive, a quarter of a pint;
Spirit of hartſhorn, two drams;
Simple pennyroyal water, twelve ounces;
Pectoral ſyrup, an ounce and a half.
Mix them together.

This compoſition is often uſed againſt recent colds, for alleviating the cough, and promoting expectoration. Where the complaints are of long ſtanding, theſe kinds of medicines have no place; nor is their uſe in any caſe to be long continued, as they relax the ſtomach, pall the appetite, and increaſe the diſorder.

A much more elegant oily emulſion, for all the intentions in which the ſimple lubricating quality of expreſſed oils is wanted, may be prepared in the following manner.

Take an ounce of powdered gum Arabic, and the ſame quantity of common water. Diſſolve the gum in the water, that it may form a thick mucilage; to which add by degrees four ounces of freſh-drawn oil of almonds, rubbing them well together in a mortar till they incorporate into a ſmooth white maſs. Then pour in by little and little, continuing the agitation, four ounces of common water; to which may be added nutmeg water, roſe water, and ſimple ſyrup, of each two ounces.

This appears to be the pleaſanteſt form that oils can be given in. The union is alſo more perfect, and the oil leſs diſpoſed to ſeparate on ſtanding, than in the emulſions obtained by other means. Even ſtrong acids added to the emulſion, produce no decompoſition in it. But alkalies can have no place in this form. For theſe, as we have obſerved upon another occaſion, precipitate pure gums themſelves from water.

EMULSIO SPERMATIS CETI.
Emulſion of ſpermaceti.

Take equal parts of ſpermaceti and of mucilage of gum Arabic. Rub them together in a mortar till they are incorporated into a thick maſs, which may be diluted at pleaſure with water, as in the foregoing proceſs.

Emulsions of ſpermaceti, or ſpermaceti draughts, are commonly prepared by means of yolks of eggs; and the emulſions, ſo prepared, are ſufficiently uniform. Thoſe made with mucilage, as here directed, have this advantage, that they are leſs diſagreeable in taſte, and not liable to grow rancid. The mixture of the ſpermaceti and mucilage may be kept, for many days, in a ſtate fit for being diluted by gradual additions of water, into a ſmooth emulſion.

EMULSIO CUM ARO.
Emulſion with arum root.

Take of
Freſh arum root,
Gum Arabic, each two drams;
Spermaceti, two ſcruples;
Common

Common water, five ounces ;
Nutmeg water,
Syrup of orange peel, each half an ounce.

Diſſolve the gum Arabic, with a part of the water, into a mucilage, which is to be beaten with the ſpermaceti into a ſmooth paſte.

To this add the arum root, previouſly beaten by itſelf into a pulp ; and rub them well together that they may be thoroughly mixed. Then gradually pour in the waters and the ſyrup.

Fresh arum root may be taken in this form without the leaſt inconvenience from the pungency, with which the root itſelf ſo violently affects the mouth. I have given a ſpoonful of the emulſion every ſix hours, or oftener, in caſes of the rheumatic kind, and generally with great benefit. The more immediate effect experienced from it was that of warming the ſtomach, and promoting ſweat, which in ſome inſtances it did profuſely.

CHAPTER VIII.

Juleps, Mixtures, and Draughts.

BY julep is commonly underſtood, an agreeable liquor, deſigned as a vehicle for medicines of greater efficacy, or to be drunk after them, or taken occaſionally as an auxiliary. In this light their baſis is generally common water, or a ſimple diſtilled water, with one-fourth or one-third its quantity of a diſtilled ſpirituous water: this mixture is ſweetened with ſugar, or any proper ſyrup, or acidulated with vegetable or mineral acids, or impregnated with other medicines ſuitable to the intention; care being taken that theſe additions be ſuch, as will not render the compound unſightly or unpalatable. The quantity uſually directed at a time, in common preſcription, is ſix or eight ounces, to be taken by ſpoonfuls.

A mixture, more ſtrictly ſo called, receives more efficacious materials, whether ſoluble in water, as extracts or ſalts, or indiſſoluble, as powders; more regard being here had to the medicinal intention, than to the ſightlineſs or palatableneſs of the compound. There is indeed no preciſe diſtinction between the two; the ſame compoſition being often called by one a julep, and by another a mixture; though, in general, few would give the name of julep to a very diſagreeable liquor, or that of mixture to a very pleaſant one.

A draught differs from a julep or mixture only in being preſcribed in leſs quantity, the whole being intended for one doſe.

JULEPUM e CAMPHORA.
Julep of camphor.

Lond.

Take of
- Camphor, one dram;
- Double-refined ſugar, half an ounce;
- Boiling water, one pint.

Grind the camphor firſt with a little rectified ſpirit of wine, until it grows ſoft; and afterwards with the ſugar, till they are perfectly mixed. Then add the water by little and little, let the mixture cool in a cloſe veſſel, and laſtly paſs it through a ſtrainer.

THIS is a more eaſy and effectual way of mingling camphor with aqueous liquors, than grinding it with water alone, or ſetting it on fire, and then quenching it in water, as directed in a former diſpenſatory, and in other books of pharmacy. Though even this method is liable to ſome inconveniencies; part of the camphor exhaling, unleſs an extraordinary deal of care be taken, upon the affuſion of the boiling water; and part remaining upon the ſtrainer. The julep taſtes ſtrong of the camphor, and may be given, in caſes where this drug is proper, in the doſe of a ſpoonful or two. In extemporaneous preſcription, vinegar is ſometimes employed inſtead of water; this acid not only rendering the julep more grateful to the palate and ſtomach, but likewiſe promoting and extending the efficacy of the camphor, rendering it ſerviceable in ſome fevers where that hot pungent medicine by itſelf would be leſs proper. In this view the following form is a very elegant one.

JULEPUM E CAMPHORA ACETOSUM.

Camphor julep with vinegar.

Take of

Camphor, one dram;
Gum Arabic, two drams;
Double-refined ſugar, half an ounce;
Vinegar, one pint.

Grind the camphor with a few drops of rectified ſpirit of wine, till it grows ſoft; then add the gum, previouſly reduced to a mucilage, with equal its quantity of water, and rub them together till they are perfectly mixed. To this mixture add by degrees the vinegar with the ſugar diſſolved in it.

By this management, the whole ſubſtance of the camphor is united with, and kept ſuſpended in, the liquor; and conſequently every ſpoonful of the mixture is equivalent to one grain and ſeven-eighths of a grain of camphor in ſubſtance. The ſame treatment ſucceeds equally when water is uſed for the menſtruum; and if the aſſiſtance of nitre be required, this alſo may be added in either form.

JULEPUM e CRETE.

Chalk julep.

Lond.

Take of

The whiteſt chalk, prepared, one ounce;
Double-refined ſugar, ſix drams;
Gum Arabic, two drams;
Water, two pints.

Mix them together.

This julep is deſigned for heartburns and ſimilar diſorders ariſing from acid juices in the firſt paſſages. The chief uſe of the gum is to give a greater degree of conſiſtence to the water, and enable it to keep the powdered chalk ſuſpended.

JULEPUM e MOSCHO.

Muſk julep.

Lond.

Take of

Damaſk-roſe water, ſix ounces by meaſure;
Muſk, twelve grains;
Double-refined ſugar, one dram.

Grind the ſugar and the muſk together, and gradually add to them the roſe-water.

This is an improvement upon the Hysteric julep with musk of Bates. Orange flower water is directed by that author; and indeed this more perfectly coincides with the muſk than roſe-water: but as the former is ſcarce procurable in perfection, the latter is here preferred. The julep appears turbid at firſt; on ſtanding a little time, it depoſits a brown powder, and becomes clear, but at the ſame time loſes great part of its virtue. This inconvenience may be prevented, by thoroughly grinding the muſk with two or three drams of mucilage of gum Arabic, before the addition of the water, as directed in the preceding chapter for making emulſions. By means of the gum, the whole ſubſtance of the muſk is made to remain ſuſpended in the water. Volatile ſpirits are in many caſes an uſeful addition to muſk, and likewiſe enable water to keep ſomewhat more of the muſk diſſolved, than it would otherwiſe retain. The following compoſition of this kind is uſed in ſome of our hoſpitals.

JULEPUM MOSCHATUM.

Muſk julep.

Take of

Roſe-water, ſix ounces;
Volatile oily ſpirit, one dram and a half;
Muſk, fifteen grains;
White ſugar, half an ounce.

Grind the muſk with the ſugar, and then mix therewith the other ingredients.

JULEPUM ALEXIPHARMACUM.

Alexipharmic julep.

1.

Take of
Simple alexeterial water, ſix ounces;
Spirituous alexeterial water, two ounces;
Syrup of clove-july-flowers, two drams.
Mix them together.

2.

Take of
Simple alexeterial water, ſix ounces;
Spirituous alexeterial water, with vinegar, two ounces;
Syrup of lemon juice, two drams.
Mix them together.

JULEPUM CARDIACUM.

Cordial julep.

1.

Take of
Simple cinnamon water,
Simple orange peel water, each three ounces;
Nutmeg water, two ounces;
Syrup of orange-peel, half an ounce;
Mix them together.

2.

Take of
Dill-ſeed water, ſix ounces;
Cardamom - ſeed water, two ounces;
Compound ſpirit of lavender,
Syrup of ſaffron, each two drams.
Mix them together.

JULEPUM CARMINATIVUM.

Carminative julep.

1.

Take of
Fennel-ſeed water, ſix ounces;
Compound juniper water, two ounces;
Syrup of clove-july-flowers, half an ounce.

2.

Take of
Jamaica - pepper water, ſix ounces;
Compound aniſeed water, two ounces;
Syrup of orange-peel, half an ounce.

3.

Take of
Dill-ſeed water, ſix ounces;
Compound caraway water, two ounces;
Syrup of ginger, half an ounce.

JULEPUM HYSTERICUM.

Hyſteric julep.

1.

Take of
Simple pennyroyal water,
Caſtor water, each three ounces;
Spirituous pennyroyal water, two ounces;
Simple ſyrup, two drams.

2.

Take of
Simple alexeterial water, ſix ounces;
Cardamom - ſeed water, two ounces;
Compound ſpirit of lavender,
Volatile aromatic ſpirit, each one dram;
Syrup of clove-july-flowers, half an ounce.

3.

Take of
Dill-ſeed water, four ounces;
Simple pepper-mint water, two ounces;
Tincture of cardamoms,
Syrup of ginger, each two drams.

JULEPUM REFRIGERANS.

A cooling julep.

Take of
Rheniſh wine, five ounces;
Damaſk-roſe water, two ounces;
Seville orange juice,
Syrup of violets, each ſix drams.

JULEPUM STOMACHICUM.
Stomachic julep.

Take of 1.
Simple mint water, ſix ounces;
Spirituous mint water, two ounces;
Syrup of ſaffron, two drams.

Take of 2.
Tincture of mint, ſix ounces;
Cardamom water, two ounces;
Simple ſyrup, half an ounce.

Take of 3.
Cinnamon water, ſix ounces;
Nutmeg water,
Stomachic tincture, each one ounce;
Syrup of orange peel, half an ounce.

THE titles of theſe mixtures expreſs the intentions for which they are calculated. Four or five ſpoonfuls of either may be taken occaſionally, or uſed as vehicles and diluters of medicines of greater efficacy.

The following *julapia* are uſed in the Edinburgh infirmary.

JULAPIUM AMMONIACUM.
Ammoniacum julep.

Take of
Milk of ammoniacum, four ounces;
Syrup of ſquills, three ounces.
Mix them together.

Two ſpoonfuls of this mixture may be given twice a day, in coughs, aſthmas, and oppreſſions at the breaſt. It is a medicine of conſiderable efficacy, but not a little unpleaſant, though called a julep in the hoſpitals where it is uſed.

JULAPIUM ANTIHYSTERICUM.
Antihyſteric julep.

Take of
Pennyroyal water, four ounces;
Compound valerian water, two ounces;
Tincture of caſtor, two drams;
Salt of hartſhorn, ten grains;
White ſugar, ſix drams.
Mix them together.

THE virtues of this compoſition are ſufficiently obvious from its title. The doſe is two ſpoonfuls, to be taken twice or thrice a day.

JULAPIUM CARDIACUM.
Cordial julep.

Take of
Alexeterial water, four ounces;
Aromatic water, two ounces;
Volatile oily ſpirit,
Tincture of ſaffron, each two drams;
White ſugar, half an ounce.
Mix and make them into a julep.

THIS mixture is an uſeful cordial in all depreſſions of the ſpirits, in the ſinkings of low fevers, and the languors to which hyſterical and hypochondriacal perſons are ſubject. An ounce, or two ſpoonfuls, may be taken for a doſe, two or three times a day.

JULAPIUM DIAPHORETICUM.
Diaphoretic julep.

Take of
Alexeterial water, four ounces;
Spirit of Mindererus, two ounces;
Salt of hartſhorn, ten grains;
White ſugar, ſix drams.
Mix them for a julep.

THIS excellent compoſition is a very powerful ſudorific, and anſwers its intention more effectually, and with greater certainty, than many others calculated for the ſame purpoſe. Where a copious ſweat is to be excited, as in rheumatic diſeaſes, two ſpoonfuls are to be taken warm in bed every hour, or two hours, till the ſweat break out. If warm diluting liquors be not afterwards ſufficient to keep it up, the ſame medicine is to be occaſionally repeated.

JULAPIUM DIAPHORETICUM ACIDUM.
Acid diaphoretic julep.

Take of
- Alexeterial water, four ounces;
- Treacle vinegar, two ounces;
- Tincture of ſaffron, half an ounce;
- Spirit of amber, one dram;
- White ſugar, one ounce.

Mix them together.

THE acid quality of this diaphoretic julep adapts it more particularly to thoſe diſorders in which any of the internal parts are inflamed, as in pleuriſies and peripneumonies. It is given in the ſame doſe as the preceding.

JULAPIUM DIURETICUM.
Diuretic julep.

Take of
- Spirit of Mindererus, four ounces;
- Compound horſeradiſh water, two ounces;
- Syrup of marſhmallows, three ounces.

Mix them together.

THE ſpirit of Mindererus is an excellent aperient ſaline liquor, capable of promoting evacuation either by the cutaneous pores, or the urinary paſſages, according to the manner of exhibiting it. We have ſeen before, that when taken warm in bed, it proves a powerful ſudorific; eſpecially if aſſiſted by volatile ſalts, ſmall doſes of opiates, or other ſubſtances which tend to determine its action to the ſkin. If the patient walk about, in a cool air, it operates gently, but for the moſt part effectually, by urine: the additions here joined to it, correſpond with this intention, and promote its operation. As this medicine excites the urinary diſcharge, without heating or irritating the parts, it takes place not only in dropſies, but likewiſe in inflammatory diſorders, wherever this ſalutary ſecretion is to be promoted. It is given to the quantity of two ſpoonfuls, thrice a day.

A dram of ſpirit of amber is ſometimes mixed with this julep, which nevertheleſs does not ſeem to receive from that ingredient any additional virtue: whatever virtues the *ſalt* of amber may poſſeſs (which probably are not ſo great as is generally ſuppoſed) the *ſpirit* is impregnated therewith in an extremely low degree.

JULAPIUM FOETIDUM.
Fetid julep.

Take of
- Aſafetida, one dram and a half;
- Rue water, ſix ounces;
- Compound valerian water, two ounces;
- Oil of hartſhorn, twenty drops;
- White ſugar, ten drams.

Rub the aſafetida in the rue water till it diſſolves; and having dropt the oil upon the ſugar, mix the whole together.

THIS compoſition is not a little fetid and unſightly; it is nevertheleſs a medicine of great efficacy, in hypochondriacal and hyſteric diſorders, aſthmas, and other nervous complaints: the doſe is one ſpoonful, to be taken thrice a day. It is ſometimes prepared without the oil of hartſhorn.

JULAPIUM HYDRAGOGUM.
Hydragogue julep.

Take of
- Chamomile-flower water, ſix ounces;
- Emetic tartar, ten grains;
- Syrup of buckthorn, two ounces.

Mix them together.

Two ſpoonfuls of this julep are given, in hydropic caſes, evrry two hours, till it take ſufficient effect as a purgative; which it generally does before the quantity here preſcribed has been made uſe of. Emetic tartar, thus exhibited in ſmall doſes, and frequently repeated, proves as certain and powerful a cathartic, as it does an emetic when given in a larger quantity at once. It operates nevertheleſs, for the moſt part, with ſufficient eaſe.

JULAPIUM SISTENS.
Binding julep.

Take of
- Alexeterial water, four ounces;
- Aromatic water, two ounces;
- Japonic confection, two drams;
- Japan earth, in powder, one dram;
- Liquid laudanum, forty drops;
- White ſugar, half an ounce.

Mix them well together.

THIS julep is calculated againſt dyſenteries and diarrhœas; in which, after proper evacuations, it generally eaſes the gripes, and reſtrains the flux. It is to be given three or four times a day, in the quantity of a ſpoonful at a time.

MISTURA ALEXETERIA.
Alexeterial mixture.

Take of
- Common water, four ounces;
- Spirituous alexeterial water with vinegar,
- Julep of camphor, each one ounce and a half;
- Compound powder of contrayerva, four ſcruples;
- Nitre, two ſcruples;
- Syrup of orange peel, ſix drams.

Mix them together.

IN hoſpitals and places ill aired, common inflammatory fevers ſometimes change into putrid and malignant ones. To guard againſt any accident of this kind, as ſoon as the inflammation begins to abate, or the pulſe to ſoften, three or four ſpoonfuls of this alexipharmic mixture may be given every ſix hours. Camphor ſeems to anſwer beſt when thus given in a liquid form; and to be moſt efficacious in ſuch ſmall doſes, for abating inflammation and nervous ſymptoms, and likewiſe for promoting a gentle diaphoreſis.

MISTURA ANTIDYSENTERICA.
Antidyſenteric mixture.

Take of 1.
- Simple cinnamon-water, ſeven ounces;
- Spirituous cinnamon water, one ounce;
- Electary of ſcordium with opium, half an ounce.

Mix them together.

Take of 2.
- Extract of logwood, three drams;
- Tincture of Japan earth, two drams;
- Spirituous cinnamon water, one ounce;
- Common water, ſeven ounces.

Diſſolve the extract in the cinnamon water, and then add the common water and the tincture.

IN recent dyſenteries, after the neceſſary evacuations, a ſpoonful or two of either of theſe mixtures may be given after every motion, or once in four or five hours. If the firſt, which is a mild opiate, fail of procuring reſt, it is a ſign that ſome of the corrupted humours ſtill remain in the bowels, and that it is more proper to go on with the evacuation, than to ſuppreſs the flux. Theſe medicines will ſometimes likewiſe take place in the laſt ſtage of the diſeaſe, when through neglect or miſmanagement it has continued till the ſtrength is much impaired, the inteſtines greatly relaxed, and their villous coat abraded; provided there be neither ichorous or involuntary ſtools, aphthæ, petechiæ, hiccup, or great anxiety at the breaſt. Rhubarb, and theſe aſtringents, are to be ſo interpoſed, that at the ſame time the putrid humours are diſlodged, the ſtrength may be ſupported, and the inteſtines braced. See Dr. Pringle's excellent Obſervations on the diſeaſes of the army, page 254, *& ſeq.* where the reader will find a full and ſatisfactory hiſtory of the ſymptoms and cure of this diſtemper, ſo frequent and fatal in the camp.

MISTURA ANTIEMETICA SALINA.

Saline antiemetic mixture.

Take of
Salt of wormwood, half a dram;
Lemon juice, ſix drams;
Simple cinnamon water, one ounce;
Fine ſugar, one ſcruple.
Mix them together.

THIS mixture is frequently preſcribed, not only for the purpoſe expreſſed in its title, but likewiſe as a ſaline aperient in icterical, inflammatory, and other diſorders, where medicines of that claſs are proper.

MISTURA CARDIACA.

Cordial mixture.

Take of
Simple cinnamon water, four ounces;
Spirituous cinnamon water, two ounces;
Extract of ſaffron, one ſcruple;
Confection of kermes, ſix drams.
Mix them together.

IN great languors and depreſſions, a ſpoonful of this rich cordial mixture may be taken every half hour.

MISTURA AD PHTHISIN.

Mixture againſt the phthiſis.

Take of 1.
Balſam of Copaiba, one dram;
Common water, four ounces;
Spirituous cinnamon water, one ounce;
Syrup of orange peel, half an ounce.
Let the balſam be diſſolved in a proper quantity of yolk of egg, and then mixed with the other ingredients.

Take of 2.
Thebaic extract, one grain;
Conſerve of roſes, half a dram.
Mix them together for a bolus.

Take of 3.
Oxymel of ſquills, a dram and a half;
Thebaic tincture, fifteen drops;
Spirituous cinnamon water, two drams;
Common water, two ounces.
Mix them together.

IN the advanced ſtate of a conſumption, we may diſtinguiſh two ſorts of coughs, one occaſioned by the ulcers, and the other by a thin rheum falling upon the fauces and trachea; which parts being then deprived of their mucus, become extremely ſenſible to irritation. It is this latter kind, perhaps, which is moſt painful and teazing to the patient. The firſt ſort requires balſamics, if the ulcer be open, and the matter can be expectorated. For this purpoſe, the firſt of the above mixtures, is a very elegant and effectual formula: two ſpoonfuls are to be taken at a time, twice a day. If the balſam purge, two drams of the paregoric elixir, added to the quantity of the mixture here preſcribed, will prevent that effect. The other kind of cough can only be palliated by incraſſants; and for that purpoſe, the second of the above compoſitions is one of the moſt ſucceſsful medicines: the conſerve is altogether ſafe, and otherwiſe well adapted to the nature of the diſeaſe, but of weak virtues: the opiate extract is the moſt efficacious ingredient, but is to be given with great caution, as opiates in general are apt to heat, to bind the body, and to obſtruct expectoration. Since theſe bad qualities are in good meaſure corrected by ſquills; as ſoon as the patient begins to complain of reſtleſs nights from coughing, the third mixture may be given at bed-time. See Pringle's Obſervations on the diſeaſes of the army.

MISTURA E VALERIANA.

Valerian mixture.

Take of
- Simple pepper-mint water, twelve ounces;
- Wild valerian root, in powder, one ounce;
- Compound ſpirit of lavender, half an ounce;
- Syrup of orange peel, one ounce.

Mix them together.

WILD valerian root, one of the principal medicines in epilepſies and vertigos, ſeems to anſwer better, when thus exhibited in ſubſtance, than if given in form of tincture or infuſion. The liquors here joined to it excellently coincide, and by their warmth and pungency greatly improve its virtues. Two ſpoonfuls of the mixture may be taken twice or thrice a day.

HAUSTUS CATHARTICUS.

Cathartic draught.

Take of 1.
- Scammony, ten grains;
- Spirit of roſemary, two drams;
- Syrup of buckthorn, ſix drams.

Grind the ſcammony with the ſpirit in a glaſs mortar, and when perfectly incorporated, mix in the ſyrup.

Take of 2.
- Jalap, in powder, one ſcruple;
- Ipecacuanha, three grains;
- Compound juniper water, one ounce;
- Infuſion of linſeed, an ounce and a half;
- Simple ſyrup, one dram.

Mix them together.

BOTH theſe compoſitions are ſtrong cathartics, yet for the moſt part eaſy and ſafe in operation. They are calculated chiefly for hydropic caſes, in which they procure copious evacuations, without weakening or fatiguing the patient ſo much as many other medicines of this kind.

HAUSTUS CATHARTICUS SALINUS.

Saline cathartic draught.

Take of
- Glauber's cathartic ſalt,
- Manna, each ſix drams;
- Boiling water, three ounces;
- Tincture of cardamoms, one dram.

Diſſolve the ſalt and manna in the water, and having ſtrained off the liquor, add to it the tincture of cardamoms.

THIS is a very elegant and agreeable ſaline purgative. Tincture of cardamoms is one of the beſt additions to liquors of this kind, or to the purging mineral waters, for rendering them acceptable to the ſtomach.

HAUSTUS DIAPHORETICUS.
Diaphoretic draught.

Take of
Spirit of Mindererus,
Syrup of meconium, each half an ounce;
Salt of hartſhorn, five grains.
Mix them together.

THIS draught is a very powerful ſaline diaphoretic. It is given with ſafety, and often with great benefit, in the beginning of inflammatory fevers, after bleeding; where theriaca, and other warm ſubſtances uſually employed, if they fail in bringing out a ſweat, increaſe the fever.

HAUSTUS DIURETICUS.
Dieuretic draught.

Take of 1.
Oxymel of ſquills, one dram and a half;
Simple cinnamon water, one ounce;
Compound ſpirit of lavender,
Syrup of orange peel, each one dram.
Mix them together.

Take of 2.
Vinegar of ſquills, one dram (or one dram and a half);
Salt of wormwood, half a dram;
Lemon juice, ſix drams;
Simple cinnamon water, an ounce and a half;
Spirituous pepper-mint water, half an ounce;
Syrup of orange peel, one dram.
Let the ſalt of wormwood and lemon juice be firſt mixed together, and then add to them the other ingredients.

Take of 3.
Diuretic ſalt, two ſcruples;
Oxymel of ſquills, one dram by meaſure;
Water, an ounce and a half.
Mix them together.

Take of 4.
Tincture of cantharides, fifteen drops;
Salt of wormwood, half a dram;
Lemon juice, ſix drams;
Simple penny-royal water, an ounce and a half;
Simple ſyrup, two drams.
Mix them together.

THE two firſt of theſe elegant and efficacious compoſitions are commended by Dr. Mead, for promoting urine in hydropic caſes. He directs them to be taken every night, or oftener, according to the urgency of the ſymptoms. The ſquill, one of the moſt powerful ~~diuretics~~ is, by the additions here joined to it, rendered not only more grateful to the palate and ſtomach, but likewiſe enabled more effectually to anſwer the purpoſes intended by it. The other two are taken from our hoſpitals; in which the former, compoſed on the ſame plan with the two preceding, is juſtly diſtinguiſhed by the title of *mitior* or milder; and the latter, containing, beſides the ſaline matter, a moderate doſe of cantharides, by that of *fortior* or ſtronger.

HAUSTUS ANODYNO-DIURETICUS.
An anodyne-diuretic draught.

Take of
Ley of tartar, half a dram;
Thebaic tincture, forty drops;
Pepper-mint water, one ounce;
Simple cinnamon water, half an ounce;
Spirituous cinnamon water, two drams;
Syrup of marſhmallows, one dram.
Mix them together.

THOUGH practitioners have

rarely ventured to exhibit opium in dropſies; yet, in thoſe which are accompanied with great pain, this anodyne drug, by eaſing the pain, and removing the ſtricture of the paſſages, which painful ſenſations always occaſion, proves a medicine of great ſervice, and notably promotes the urinary diſcharge. Dr. Mead has given a remarkable inſtance of the good effects of the mixture above preſcribed, in a perſon labouring under an aſcites and tympany at the ſame time, where the pain was intolerable, the thirſt intenſe, and the urine in very ſmall quantity. The ſtronger purgatives increaſed the diſtemper; ſoap, alkaline ſalts, nitre, and other diuretics, were tried in vain: this draught (when the patient ſeemed to be beyond any aſſiſtance from medicine) procured unexpected relief, not only a gentle ſleep, and truce from the pain, but likewiſe a copious diſcharge of urine. By repeating the medicine, for a little time, every eight hours, and afterwards uſing corroborants, the cure was perfectly completed.

CHAPTER IX.

Lotions, Gargariſms, Injections, &c.

AQUA ALUMINOSA BATEANA.

Bates's alum water.

Lond.

TAKE of
Alum,
White vitriol, each half an ounce;
Water, two pints.
Boil the ſalts in the water till they are diſſolved, let the ſolution ſettle, and afterwards filter it through paper.

Bates directs the ſalts to be firſt powdered and melted over the fire; but this is needleſs trouble, ſince the melting only evaporates the aqueous parts, which are reſtored again on the addition of the water. This liquor is uſed for cleanſing and healing ulcers and wounds; and for removing cutaneous eruptions, the part being bathed with it hot, three or four times a day. It is ſometimes likewiſe employed as a collyrium; and as an injection, in the gonorrhœa and fluor albus, when not accompanied with virulence.

AQUA ALUMINOSA.

Alum water.

Edinb.

Take of
Corroſive mercury ſublimate,
Alum, each two drams;
Water, two pints.
Let the ſublimate and alum be ground into powder, and boiled with the water, in a glaſs veſſel, to the conſumption of half the water; then ſuffer the liquor to ſettle, and pour it off clear from the ſediment.

This is taken from Fallopius, with the exchange of roſe and plantane waters for common water, which is equally fit for the purpoſe. The compoſition is deſigned chiefly for cutaneous puſtules and ulcerations.

AQUA SAPPHIRINA.

Sapphire-coloured water.

Lond.

Take of
Lime-water, newly made, one pint;
Sal ammoniac, one dram.
Let them ſtand together, in a copper veſſel, or along with ſome plates of copper, until the liquor have acquired a ſapphire colour.

Take of
Lime-water, newly made, one pint;
Sal ammoniac, two drams.
Diſſolve the ſalt in the lime-water, and let the ſolution ſtand in a braſs veſſel, until it have acquired a blue colour.

This water is much in uſe, as a detergent of foul and obſtinate ulcers, and for taking away ſpecks or films in the eyes. The copper contributes more to its colour, than to its medicinal efficacy: for the quantity of the metal diſſolved is extremely minute.

AQUA VITRIOLICA CÆRULEA.

Blue vitriolic water.

Lond.

Take of
- Blue vitriol, three ounces ;
- Alum,
- Strong ſpirit (or oil) of vitriol, each two ounces ;
- Water, a pint and a half.

Boil the ſalts in the water, until they are diſſolved, then add the acid ſpirit, and filter the mixture through paper.

AQUA STYPTICA.

Styptic water.

Edinb.

Take of
- Blue vitriol,
- Alum, each three ounces ;
- Water, two pounds ;
- Vitriolic acid, one ounce and a half.

Boil the ſalts in the water till they are diſſolved, then filter the liquor, and add the acid.

These compoſitions are formed upon the ſtyptic, recommended by Sydenham, for ſtopping bleeding at the noſe, and other external hæmorrhages : for this purpoſe, cloths or doſſils are to be dipt in the liquor, and applied to the part.

AQUA VITRIOLICA CAMPHORATA.

Camphorated vitriolic water.

Lond.

Take of
- White vitriol, half an ounce ;
- Camphor, two drams ;
- Boiling water, two pints.

Mix them, that the vitriol may be diſſolved ; and after the feces have ſubſided, filter the liquor through paper.

This is an unfrugal method of managing camphor, the greateſt part of which ſeparates with the feces of the vitriol, very little of it remaining ſuſpended in the water. The Edinburgh college, in a preceding edition of their pharmacopœia, had a preparation under the title of Aqua ophthalmica, differing little otherwiſe from this than in the quantity of water being greater, and in an addition of tutty and bole, ingredients which could be of no uſe, as not being ſoluble in water, and ſubſiding from it in ſtanding. They have therefore reduced this preparation to the following more ſimple form.

AQUA VITRIOLICA.

Vitriolic water.

Edinb.

Take of
- White vitriol, ſixteen grains ;
- Water, eight ounces ;
- Weak ſpirit of vitriol, ſixteen drops.

Diſſolve the vitriol in the water ; afterwards add the acid, and filter.

Where the eyes are watery or inflamed, theſe ſolutions of white vitriol are very uſeful applications : the ſlighter inflammations will frequently yield to this medicine without any other aſſiſtance : in the more violent ones, venæſection and cathartics are to be premiſed to its uſe.

AQUA PHAGEDÆNICA.

Phagedenic water.

Edinb.

Take of
- Lime-water, one pint ;
- Corroſive mercury ſublimate, half a dram.

Let a ſolution be made.

This is deſigned for waſhing and cleanſing old foul ulcers, and preventing the growth of fungous fleſh. It is for moſt purpoſes rather too acrid to be uſed without dilution.

GARGARISMA ASTRINGENS.
Aſtringent gargariſm.

Take of
Oak bark, one ounce ;
Alum, one dram ;
Honey of roſes, one ounce ;
Water, a pint and a half.

Boil the water with the oak bark, till the liquor, when ſtrained, will amount only to one pint ; to which add the alum and the honey.

GARGARISMA COMMUNE.
Common gargariſm.

Take of
Tincture of roſes, one pint ;
Honey of roſes, two ounces.

Mix them together.

Or,

Take of
Water, ſix ounces ;
Nitre, one dram ;
Honey of roſes, one ounce.

Mix them together. Where acids are requiſite, forty drops of the weak ſpirit of vitriol are added to this compoſition.

GARGARISMA DETERGENS.
Detergent gargariſm.

Take of
Emollient decoction, one pint ;
Tincture of myrrh, one ounce ;
Honey, an ounce and a half.

Mix them together.

GARGARISMA EMOLLIENS.
Emollient gargariſm.

Take of
Marſhmallow root, two ounces ;
Figs, four in number ;
Water, three pints.

Boil them, till one pint be waſted, and then ſtrain the liquor.

These liquors are uſed for waſhing the mouth and fauces ; the firſt, where the parts are extremely relaxed ; the ſecond and third, where ulcerations require to be deterged, or the excretion of thick viſcid ſaliva promoted ; and the fourth, where the mouth is dry, parched, and rigid, to moiſten and ſoften it. In ſome caſes, volatile ſpirits may be advantageouſly joined to theſe kinds of preparations. Dr. Pringle informs us, that, in the inflammatory quinſey, or ſtrangulation of the fauces, he has obſerved little benefit ariſing from the common gargles ; that ſuch as were of an acid nature ſeemed to do more harm than good, by contracting the emunctories of the ſaliva and mucus, and thickening theſe humours ; that the decoction of figs in milk and water ſeemed to have a contrary effect, eſpecially if ſome ſpirit of ſal ammoniac was added, by which the ſaliva was made thinner, and the glands brought to ſecrete more freely ; a circumſtance always conducive to the cure.

ENEMA DE AMYLO.
Starch glyſter.

Take of
Gelly of ſtarch, four ounces ;
Linſeed oil, half an ounce.

Liquefy the gelly over a gentle fire, and then mix in the oil. Forty drops of liquid laudanum are ſometimes added.

ENEMA ANODYNUM, ſive OPIATUM.
Anodyne, or opiate glyſter.

Take of
Infuſion of linſeed, ſix ounces ;
Liquid laudanum, forty drops.

Or,

Mutton broth, five ounces ;

Thebaic extract, three grains.

ENEMA ANTICOLICUM.

Glyſter againſt the colic.

Take of
Common decoction, half a pint;
Tinctura ſacra, one ounce;
Common ſalt, one dram;
Linſeed oil, two ounces.
Mix them together.

ENEMA ASTRINGENS.

Aſtringent glyſter.

Take of
Lime-water, ten ounces;
Japonic confection, half an ounce.
Mix them together for a glyſter, of which one half is to be injected at a time.

ENEMA ASTRINGENS BALSAMICUM.

Aſtringent balſamic glyſter.

This is made by adding to the foregoing half an ounce of Locatelli's balſam, diſſolved in the yolk of an egg.

ENEMA COMMUNE.

Common glyſter.

Take of
Common decoction, twelve ounces;
Lenitive electary, one ounce;
Common ſalt, half an ounce;
Oil olive, two ounces.
Mix them together.

ENEMA DOMESTICUM.

Domeſtic glyſter.

Take of
Cows' milk, half a pint;
Brown ſugar,
Oil olive, each one ounce.
Mix them together.

ENEMA EMOLLIENS.

Emollient glyſter.

Take of
Palm oil, an ounce and a half;
Cows' milk, half a pound.
Let the oil be beaten up with the yolk of one egg, and then add the milk.

ENEMA FOETIDUM.

Fetid glyſter.

Take of
Aſafetida, two drams;
Rue,
Savin, each half an ounce;
Oil olive, one ounce;
Oil of amber, half a dram;
Water, one pint and a half.
Boil the water with the rue and ſavin, till half a pint be waſted. Then ſtrain off the remaining decoction, and mix with it the aſafetida and the oils. Half the quantity of the compoſition here directed, is to be injected at a time.

ENEMA PURGANS.

Purging glyſter.

Take of
Common decoction, half a pint;
White ſoap, one ounce;
Syrup of buckthorn, an ounce and a half.
Mix them together.

ENEMA TEREBINTHINATUM.

Turpentine glyſter.

Take of
Common decoction, ten ounces;
Venice turpentine (diſſolved in the yolk of an egg) half an ounce;
Linſeed oil, one ounce.
Mix them together.

THE uſes of theſe compoſitions are ſufficiently obvious from their titles. The ſtarch, anodyne, emollient, and aſtringent glyſters, are uſed in dyſenteries, and other alvine fluxes, to ſtrengthen the tone of the inteſtines, defend them from being corroded by the acrimonious humours, to heal their exulcerations,

tions, and eaſe the pains which accompany theſe diſorders. The turpentine glyſter is injected in nephritic caſes; the fetid in hyſteric ones. The others are calculated for unloading the inteſtines of their contents, where the exhibition of purgatives in other forms is improper, or unſafe. Glyſters have been looked upon by ſome as mere topical applications, whoſe operation was confined to the inteſtine, into which they are received. But experience has ſhewn, that in many caſes their action is extended much further. Thus the turpentine glyſter promotes the diſcharge by the kidneys, and communicates to the urine a violet ſmell; and the anodyne glyſter proves narcotic, as if a moderate doſe of opium had been ſwallowed. Perſons have been inebriated by ſpirituous glyſters; and ſome affirm, that life has been ſupported for ſeveral days, by thoſe of a nutritious kind.

INJECTIO BALSAMICA.

Balſamic injection.

Take of
Balſam of Copaiba, half an ounce;
Lime-water, ſix ounces;
Honey of roſes, two ounces.

Let the balſam be well beaten up with the yolk of one egg; and then gradually add the lime-water and honey.

INJECTIO MERCURIALIS.

Mercurial injection.

Take of
Quickſilver,
Balſam of Copaiba, each half an ounce;
Roſe-water, half a pint.

Rub the quickſilver with the balſam, till they be perfectly incorporated; then mix with them the yolk of an egg, and afterwards add the roſe-water.

THIS and the foregoing preparation are deſigned to be injected into the urethra in virulent gonorrhœas, for cleanſing and deterging the parts.

CHAPTER X.

Plaſters.

PLASTERS are compoſed chiefly of oily and unctuous ſubſtances, united with powders, into ſuch a conſiſtence, that the compound may remain firm in the cold, without ſticking to the fingers; that it may be ſoft and pliable in a ſmall heat; and that by the warmth of the human body it be ſo tenacious, as readily to adhere both to the part on which it is applied, and to the ſubſtance on which it is ſpread.

There is however a difference in the conſiſtence of plaſters, according to the purpoſes to which they are to be applied: thus, ſuch as are intended for the breaſt and ſtomach, ſhould be very ſoft and yielding; whilſt thoſe deſigned for the limbs are made firmer and more adheſive. An ounce of expreſſed oil, an ounce of yellow wax, and half an ounce of any proper powder, will make a plaſter of the firſt conſiſtence; for a hard one, an ounce more of wax, and half an ounce more of powder, may be added. Plaſters may likewiſe be made of reſins, gummy reſins, &c. without wax, eſpecially in extemporaneous preſcription: for officinals, theſe compoſitions are leſs proper, as they ſoon grow too ſoft in keeping, and fall flat in a warm air.

It has been ſuppoſed, that plaſters might be impregnated with the ſpecific virtues of different vegetables, by boiling the recent vegetable with the oil employed for the compoſition of the plaſter. The coction was continued till the herb was almoſt criſp, with care to prevent the matter from contracting a black colour: after which the liquid was ſtrained off, and ſet on the fire again till all the aqueous moiſture had exhaled. We have already obſerved, that this treatment does not communicate to the oils any very valuable qualities, even relative to their uſe in a fluid ſtate: much leſs can plaſters, made with ſuch oils, receive any conſiderable efficacy from the herbs.

Calces of lead, boiled with oils, unite with them into a plaſter of an excellent conſiſtence, and which makes a proper baſis for ſeveral other plaſters.

In the boiling of theſe compoſitions, a quantity of water muſt be added, to prevent the plaſter from burning and growing black. Such water, as it may be neceſſary to add during the boiling, muſt be previouſly made hot: for cold liquor would not only prolong the proceſs, but likewiſe occaſion the matter to explode, and be thrown about with violence, to the great danger of the operator. This accident will equally happen upon the addition of hot water, if the plaſter be extremely hot.

EMPLASTRUM ANODYNUM.

Anodyne plaſter.

Edinb.

Take of
- White reſin, eight ounces;
- Tacamahaca, in powder,
- Galbanum, each four ounces;
- Cummin ſeeds, three ounces;
- Black ſoap, four ounces.

Melt the reſin and the gums together; then add the powdered ſeeds and the ſoap, and make the whole into a plaſter.

This plaſter ſometimes gives eaſe in ſlight rheumatic pains, which it is ſuppoſed to effect by preventing the afflux of humours to the part, and putting in motion and repelling ſuch as already ſtagnate there.

EMPLASTRUM ANTIHYSTERICUM.

Antihyſteric plaſter.

Edinb.

Take of
  Common plaſter,
  Aſafetida, ſtrained, of each two parts;
  Yellow wax,
  Galbanum, ſtrained, of each one part.

This plaſter is applied to the umbilical region, or over the whole abdomen, in hyſteric caſes; and ſometimes with good effect.

EMPLASTRUM ATTRAHENS.

Drawing plaſter.

Lond.

Take of
  Yellow reſin,
  Yellow wax, each three pounds;
  Tried mutton ſuet, one pound.
Melt them together, and, whilſt the maſs remains fluid, paſs it through a ſtrainer.

This is a very well contrived plaſter for the purpoſe expreſſed in its title. It is calculated to ſupply the place of melilot plaſter: whoſe great irritation, when employed for the dreſſing of bliſters, has been continually complained of. This was owing to the large quantity of reſin contained in it, which is here for that reaſon retrenched. It ſhould ſeem that, when deſigned only for dreſſing bliſters, the reſin ought to be entirely omitted, unleſs where a continuance of the pain and irritation, excited by the veſicatory, is required. Indeed plaſters of any kind are not very proper for this purpoſe: their conſiſtence makes them ſit uneaſy, and their adheſiveneſs renders taking them off painful. Cerates, which are ſofter and leſs adheſive, appear much more eligible. The *ceratum album* will ſerve for general uſe: and, for ſome particular purpoſes, the *ceratum citrinum* may be applied.

EMPLASTRUM CEREUM.

Wax plaſter.

Edinb.

Take of
  Yellow wax, three parts;
  Mutton ſuet,
  White reſin, of each two parts.

This plaſter is ſimilar to the foregoing, but the further reduction of the reſin renders it for ſome purpoſes more eligible.

EMPLASTRUM CEPHALICUM.

Cephalic plaſter.

Lond.

Take of
  Burgundy pitch, two pounds;
  Soft labdanum, one pound;
  Yellow reſin,
  Yellow wax, each four ounces;
  The expreſſed oil, called oil of mace, one ounce.
Melt the pitch, reſin, and wax together; then add, firſt the labdanum, and afterwards the oil of mace.

Edinb.

Take of
  Tacamahaca in powder,
  Yellow wax,
  Venice turpentine, each four ounces;
  Oil of lavender, two drams;
  Oil of amber, one dram.
Melt the tacamahaca with the wax, and then add the turpentine, that

that a plaſter may be formed. When this compound is taken from the fire, and grown almoſt cold, mix in the oils.

These plaſters are applied, in weakneſs or pains of the head, to the temples, forehead, &c. and ſometimes likewiſe to the feet. Schulze relates, that an inveterate rheumatiſm in the temples, which at times extended to the teeth, and occaſioned intolerable pain, was completely cured in two days by a plaſter of this kind (with the addition of a little opium) applied to the part, after many other remedies had been tried in vain. He adds, that a large quantity of liquid matter exuded under the plaſter, in drops, which were ſo acrid as to corrode the cuticle.

EMPLASTRUM de CICUTA, cum AMMONIACO.

Plaſter of hemlock, with ammoniacum.

Edinb.

Take of
- Juice of hemlock leaves, four ounces;
- Gum ammoniacum, eight ounces;
- Vinegar of ſquills, as much as is ſufficient to diſſolve the gum.

Add the juice to this ſolution, and having ſtrained the mixture, boil it to the conſiſtence of a plaſter.

This plaſter was formerly ſuppoſed to be a powerful cooler and diſcutient, and to be particularly ſerviceable againſt ſwellings of the ſpleen and diſtentions of the hypochondres. For ſome time paſt, it has been among us entirely neglected; and hence the London college, at a late reviſal of their pharmacopœia, omitted it. But the high reſolvent power which Dr. Stork has diſcovered in hemlock, and which he found it to exert in this as well as in other forms, entitle it to further trials. The plaſter appears very well contrived, and the additional ingredients well choſen for aſſiſting the efficacy of the hemlock.

EMPLASTRUM COMMUNE.

Common plaſter, uſually called Diachylon.

Lond.

Take of
- Oil olive, one gallon;
- Litharge, ground into a moſt ſubtile powder, five pounds.

Boil them over a gentle fire with about two pints of water, keeping them continually ſtirring, till the oil and litharge unite, and acquire the conſiſtence of a plaſter. If all the water ſhould be conſumed before this happens, add ſome more water previouſly made hot.

Edinb.

Take of
- Oil olive, ſix pints;
- Litharge, three pounds.

Boil them into a plaſter.

The heat in theſe proceſſes ſhould be gentle, and the matter kept continually ſtirring, otherwiſe it ſwells up, and is apt to run over the veſſel. If the compoſition prove diſcoloured, the addition of a little white lead and oil will improve the colour.

Theſe plaſters are the common application in excoriations of the ſkin, ſlight fleſh wounds, and the like. They keep the part ſoft, and ſomewhat warm, and defend it from the air, which is all that can be expected in theſe caſes from any plaſter. Some of our induſtrious medicine-makers have thought theſe purpoſes might be anſwered by a cheaper compoſition, and accordingly have added a large quantity of common whiting and hogs lard.

This, however, is by no means allowable, not only as it does not ſtick ſo well, but likewiſe as the lard is apt to grow rancid and acrimonious. The counterfeit is diſtinguiſhable by the eye.

EMPLASTRUM COMMUNE ADHÆSIVUM.

Common ſticking plaſter.

Lond.

Take of
Common plaſter, three pounds;
Yellow reſin, half a pound.

Melt the common plaſter over a very gentle fire; then add the reſin, firſt reduced into powder, that it may melt the ſooner; and mix them all together.

This plaſter may otherwiſe be made, by taking, inſtead of the common plaſter, its ingredients oil and litharge; and adding the reſin a little before they have come to the due conſiſtence; then continue the boiling, till the plaſter is finiſhed.

It turns out the moſt elegant when made by this laſt method.

EMPLASTRUM ADHÆSIVUM.

Sticking plaſter.

Edinb.

Take of
Common plaſter, five parts;
White reſin, one part.

These plaſters are uſed chiefly as adheſives, for keeping on other dreſſings, &c.

EMPLASTRUM COMMUNE cum GUMMI.

Common plaſter with gums.

Edinb.

Take of
Common plaſter, three pounds;
Galbanum ſtrained, eight ounces;
Common turpentine,
Frankincenſe, each three ounces.

Melt the galbanum with the turpentine, over a gentle fire, and ſprinkle in the frankincenſe, reduced to powder: then gradually mix with theſe the common plaſter, previouſly liquefied by a very gentle heat.

Or, inſtead of the common plaſter already made, you may take the oil and litharge boiled together. As ſoon as theſe unite, before they have acquired the conſiſtence of a plaſter, the other ingredients are to be added.

EMPLASTRUM GUMMOSUM.

Gum plaſter.

Edinb.

Take of
Common plaſter, eight parts;
Gum ammoniac, ſtrained,
Galbanum, ſtrained,
Yellow wax, of each one part.

Both theſe plaſters are uſed as digeſtives and ſuppuratives; particularly in abſceſſes, after a part of the matter has been maturated and diſcharged, for ſuppurating or diſcuſſing the remaining hard part.

EMPLASTRUM CROCEUM, vulgo OXYCROCEUM.

Saffron plaſter, commonly called Oxycroceum.

Edinb.

Take of
Burgundy pitch,
Yellow wax, each one pound;
Galbanum,
Tar, each half a pound;
Saffron, rubbed into powder, two ounces;

Let the Burgundy pitch, wax, and galbanum, be melted together over a gentle fire; then add the tar and saffron, and make the whole into a plaſter.

This infrugal and injudicious

compoſition is ſaid to ſtrengthen the parts to which it is applied, eſpecially the tendinous ones; to warm in a great degree; and to reſolve and diſcuſs cold tumours. Tar is now introduced as an ingedient, in the room of Venice turpentine, myrrh, and olibanum.

EMPLASTRUM e CYMINO.

Cummin plaſter.

Lond.

Take of
- Burgundy pitch, three pounds;
- Yellow wax,
- Cummin ſeeds,
- Caraway ſeeds,
- Bay berries, each three ounces.

Melt the pitch with the wax; then ſprinkle in the other ingredients, firſt reduced into a powder, and mix the whole well together.

This plaſter ſtands recommended as a moderately warm diſcutient; and is directed by ſome to be applied to the hypogaſtric region, for ſtrengthening the viſcera, and expelling flatulencies.

EMPLASTRUM DEFENSIVUM.

Defenſive plaſter.

Edinb.

Take of
- Common plaſter, twenty-four parts;
- White reſin, ſix parts;
- Yellow wax,
- Olive oil, of each three parts;
- Colcothar of vitriol, eight parts.

Rub the colcothar with the oil, and afterward add it to the reſt when melted.

This plaſter is laid round the lips of wounds and ulcers, over the other dreſſings, for defending them from inflammation, and a fluxion of humours; which however, as Mr. Sharp very juſtly obſerves, plaſters, on account of their conſiſtence, tend rather to bring on than to prevent.

EMPLASTRUM e MELILOTO.

Melilot plaſter.

Take of
- Melilot leaves, freſh, ſix pounds;
- Beef ſuet, three pounds;
- White reſin, eight pounds;
- Yellow wax, four pounds.

Boil the herb in the melted ſuet till it is almoſt criſp; then ſtrongly preſs out the ſuet, and, adding the reſin and wax, boil the whole a little, ſo as to make a plaſter.

This plaſter has been frequently made uſe of for dreſſing bliſters: ſee Emplastrum attrahens. The London college have diminiſhed the quantity of reſin, to render the compoſition leſs irritating; and likewiſe omitted the herb, as being of no ſignificancy towards the uſe of the plaſter, and of a very diſagreeable ſcent; a circumſtance of primary conſequence to be avoided in diſorders, where freedom from diſturbance, and every means that can contribute to quiet reſt, ought by all poſſible endeavours to be procured: not to mention the miſchievous adulterations ſometimes practiſed in this plaſter with irritating materials, for procuring the green colour, which is made its marketable characteriſtic, more compendiouſly than by the decoction of the herb. The moſt certain method of diſcovering abuſes of this kind, is to put a little of the plaſter into ſome ſpirit of ſal ammoniac; if it tinge the ſpirit blue, we may be certain it is adulterated. The London college has ſubſtituted to this plaſter the *emplaſtrum attrahens*, and the Edinburgh the *emplaſtrum cereum*.

EMPLASTRUM ex AMMONIACO cum MERCURIO.

Plaſter of ammoniacum with mercury.

Lond.

Take of
Gum ammoniacum, ſtrained, one pound;
Quickſilver, three ounces;
Simple balſam of ſulphur, one dram.

Grind the quickſilver with the balſam of ſulphur, till it ceaſe to appear; then, having melted the ammoniacum, add it gradually, a little before it cools, to this mixture; and let the whole be perfectly mingled together.

This is a very well contrived mercurial plaſter. If in ſome caſes it ſhould not prove adheſive enough, the addition of a ſmall quantity of turpentine will readily make it ſo.

EMPLASTRUM COMMUNE cum MERCURIO.

Common plaſter with mercury.

Lond.

Take of
Common plaſter, one pound;
Quickſilver, three ounces;
Simple balſam of ſulphur, one dram.

Make them into a plaſter, after the ſame manner as the foregoing.

EMPLASTRUM e HYDRARGYRO, ſive CŒRULEUM.

Mercurial plaſter.

Edinb.

Take of
Olive oil,
White reſin, of each one part;
Quickſilver, three parts;
Common plaſter, ſix parts.

Melt the oil and reſin together, and when cold, rub the quickſilver with them till perfectly incorporated; then add the common plaſter melted, by degrees, and accurately mix the whole together.

These mercurial plaſters are looked on as powerful reſolvents and diſcutients, acting with much greater certainty in theſe intentions, than any compoſition of vegetable ſubſtances alone; the mercury exerting itſelf in a conſiderable degree, and being ſometimes introduced into the habit in ſuch quantity as to affect the mouth. Pains in the joints and limbs from a venereal cauſe, nodes, tophs, and beginning indurations of the glands, are ſaid ſometimes to yield to them.

EMPLASTRUM e MINIO.

Red lead plaſter.

Lond.

Take of
Oil olive, four pints;
Red lead, reduced to a moſt ſubtile powder, two pounds and a half.

Make them into a plaſter, after the manner directed for preparing the common plaſter. But more water is here required, and greater care is neceſſary to prevent the compoſition from burning and growing black.

This is uſed for the ſame purpoſes as the common or diachylon plaſter, from which it differs little otherwiſe than in colour. It has an inconvenience of not ſticking ſo well; and therefore the Edinburgh college have now omitted this compoſition.

EMPLASTRUM DE MINIO CUM SAPONE.

Red lead plaſter with ſoap.

This is made by adding to the foregoing plaſter, taken from the fire as ſoon as the moiſture is evaporated,

porated, and whilſt hot, half a pound of Spaniſh ſoap cut into thin ſlices: ſtir the whole ſtrongly together, until the ſoap be liquefied, and a plaſter formed according to art.

This is much eſteemed by ſome, for diſcuſſing gouty tumours, and the juices ſtagnating after ſprains. Whatever virtues it may have, diſtinct from the general ones of the applications of this claſs, they depend entirely upon the ſoap; and ſoap in the form of plaſters does not appear to exert much of the efficacy which it does in forms of a ſofter conſiſtence.

EMPLASTRUM e MUCILAGINIBUS.

Plaſter of mucilages.

Lond.

Take of

Yellow wax, forty ounces;
Oil of mucilages, half a pint;
Gum ammoniacum, ſtrained, half a pound;
Common turpentine, two ounces.

Melt the ammoniacum with the turpentine; and having, in another veſſel, liquefied the wax with the oil, add this latter mixture to the other.

Some have been accuſtomed to uſe, inſtead of the oil of mucilages, common oil olive, flavoured with fenugreek ſeeds. And poſſibly this ſubſtitution may be admitted as a venial one; for the oil of mucilages, genuinely made, contains ſcarce any thing of any of the ingredients, except that part of the fenugreek ſeeds wherein their flavour reſides, the mucilaginous materials ſerving only to provide it with a name.

EMPLASTRUM ROBORANS.

Strengthening plaſter.

Lond.

Take of

Common plaſter, two pounds;
Frankincenſe, half a pound;
Dragons blood, three ounces.

Melt the common plaſter, and add to it the other ingredients reduced into a powder.

The dragons blood ſhould be reduced to a very fine powder, otherwiſe the mixture will not be of an uniform colour.

This is a reformation of the laborious and injudicious compoſition deſcribed in our preceding pharmacopœias, under the title of Emplastrum ad herniam; and though far the moſt elegant and ſimple, is as effectual for that purpoſe as any of the medicines of this kind. If conſtantly worn, with a proper bandage, it will, in children, frequently do ſervice; though perhaps not ſo much from any ſtrengthening quality of the ingredients, as from its being a ſoft, cloſe, and adheſive covering. It has been ſuppoſed, that plaſters compoſed of ſtyptic medicines conſtringe and ſtrengthen the part to which they are applied; but on no very juſt foundation; for plaſters in general relax rather than aſtringe; the unctuous ingredients, neceſſary in their compoſition, counteracting and deſtroying the effect of the others.

EMPLASTRUM e SAPONE.

Soap plaſter.

Lond.

Take of

Common plaſter, three pounds;
Hard ſoap, half a pound.

Having melted the common plaſter, mix with it the ſoap, and boil them to the conſiſtence of a plaſter. Take care not to let it grow too cold, before you form it into rolls, for then it will prove too brittle.

This plaſter differs only in colour from the red lead plaſter, with ſoap, before mentioned.

EMPLASTRUM SAPONACEUM.

Saponaceous plaſter.

Edinb.

Take of
  Common plaſter, four parts;
  Gum plaſter, two parts;
  Spaniſh ſoap, ſhaved thin, one part.

Melt the plaſters together, and add the ſoap; afterwards boil it a little, that it may make an emplaſter.

EMPLASTRUM STOMACHICUM.

Stomach plaſter.

Lond.

Take of
  Soft labdanum, three ounces;
  Frankincenſe, one ounce;
  Cinnamon,
  The expreſſed oil, called oil of mace, each half an ounce;
  Eſſential oil of mint, one dram.

Having melted the frankincenſe, add to it firſt the labdanum ſoftened by heat, and then the oil of mace. Afterwards mix theſe with the cinnamon and oil of mint; and beat them together in a warm mortar, into a maſs, which is to be kept in a cloſe veſſel.

This is a very elegant ſtomach plaſter. It is contrived ſo as to be eaſily made occaſionally (for theſe kinds of compoſitions, on account of their volatile ingredients, are not fit for keeping), and to be but moderately adheſive, ſo as not to offend the ſkin; and that it may without difficulty be frequently taken off and renewed, which theſe ſorts of applications, in order to their producing any conſiderable effect, require to be.

Edinb.

Take of
  Yellow wax, eight ounces;
  Tacamahaca in powder, four ounces;
  Cloves, powdered, two ounces;
  Palm oil, ſix ounces;
  Expreſſed oil of mace, an ounce and a half;
  Eſſential oil of mint, two drams.

Melt the wax and tacamahaca with the palm oil; then removing the mixture from the fire, add the other ingredients, and make them into a plaſter according to art.

These plaſters are applied to the pit of the ſtomach, in weakneſs of that viſcus, in vomitings, the diſorder improperly called the heart-burn, &c. and ſometimes with good ſucceſs. The pit of the ſtomach however, as Hoffman has obſerved, is not always the moſt proper place for applications of this kind. If applied to the five lower ribs of the left ſide, towards the back, the ſtomach will in general receive more benefit from them; for it appears from anatomical inſpection, that greateſt part of it is ſituated there.

EMPLASTRUM VESICATORIUM.

Bliſtering plaſter, or epiſpaſtic plaſter.

Lond.

Take of
  Drawing plaſter, two pounds;
  Cantharides, one pound;
  Vinegar, half a pint.

Melt the drawing plaſter, and a little before it grows ſtiff, mix in the cantharides, reduced into a moſt ſubtile powder; then add the vinegar, and work them well together.

Edinb.

Take of
- Hogs fat,
- Yellow wax,
- White reſin,
- Cantharides, in fine powder, of each an equal quantity.

After the reſt are melted, remove them from the fire, and add the cantharides.

Compound epiſpaſtic plaſter.
Edinb.

Take of
- Burgundy pitch, twelve ounces;
- Yellow wax, four ounces;
- Venice turpentine, eighteen ounces;
- Muſtard ſeed,
- Black pepper, each one ounce;
- Verdegris, two ounces;
- Cantharides, twelve ounces.

Melt the wax and pitch together; then add the turpentine; and when this is liquefied, ſprinkle in the other ingredients, firſt powdered and mixed together; keeping them continually ſtirring, ſo as to make a plaſter thereof according to art.

The bliſtering plaſters are to be kept in oiled bladders.

THIS laſt compoſition has long been uſed in ſome particular ſhops, as the moſt infallible bliſter: though either of the other two anſwers the purpoſe very ſucceſsfully. Whether the vinegar in the firſt be of any advantage, is greatly to be doubted. In ſome caſes, indeed, it has been obſerved, that the plaſter without this addition ſeemed at firſt to fail of its effect; and that on taking it off, and rubbing the part with vinegar, the ſame plaſter, applied again, has bliſtered freely: but this does not appear to be ſo much owing to any peculiar quality of the vinegar, as to its ſoftening the ſkin when applied in this manner, and fitting it for the action of the cantharides. When mixed with the other ingredients of the plaſter, it has not this effect: it likewiſe exhales in keeping; inſomuch that the compoſition, though ſufficiently ſoft at firſt, becomes in no long time too dry. Some have been accuſtomed to ſpare the trouble of making any plaſter on purpoſe for bliſtering, by occaſionally ſpreading ſome of the cantharides in powder upon a common plaſter.

EMPLASTRUM ANODYNO-DISCUTIENS.
An anodyne and diſcutient plaſter.

Take of
- Cummin plaſter, two ounces;
- Camphor, three drams;

Thebaic extract, one dram and a half.

Grind the camphor, with ſome drops of oil olive, into a very ſubtile powder, and then mix it with the other ingredients, according to art, into a plaſter.

EMPLASTRUM CALIDUM.
Warm plaſter.

Take of
- Gum plaſter, one ounce;
- Bliſtering plaſter, two drams.

Melt them together over a gentle fire.

EMPLASTRUM SUPPURANS.
Suppurating plaſter.

Take of
- Gum plaſter, an ounce and a half;
- Burgundy pitch, half an ounce.

Melt them together.

THE uſes of the three foregoing compoſitions, which are taken from our hoſpitals, are ſufficiently obvious from their titles. The warm plaſter is a very ſtimulating application, of great uſe in fixt pains; as in the rheumatiſm, ſciatica, beginning chilblains, &c.

CHAP-

CHAPTER XI.

Ointments, Liniments, and Cerates.

OINTMENTS and liniments differ from plaſters little otherwiſe than in conſiſtence. An officinal plaſter, diluted with ſo much oil as will reduce it to the thickneſs of ſtiff honey, forms an ointment: by further increaſing the oil, it becomes a liniment.

UNGUENTUM ÆGYPTIACUM.

Edinb.

Take of
- Verdegris, finely powdered, five ounces;
- Honey, fourteen ounces;
- Vinegar, ſeven ounces.

Boil them over a gentle fire, to the conſiſtence of an ointment.

MEL ÆGYPTIACUM.

Lond.

Take of
- Verdegris, reduced into a very ſubtile powder, five ounces;
- Honey, fourteen ounces by weight;
- Vinegar, ſeven ounces by meaſure.

Boil theſe ingredients together, over a gentle fire, till they have acquired a due conſiſtence, and a reddiſh colour. On keeping this mixture for ſome time, the thicker part falls to the bottom; the thinner, which floats on the top, is called *mel Ægyptiacum.*

THESE preparations are deſigned only for external uſe, for cleanſing and deterging ulcers, and keeping down fungous fleſh; they are ſerviceable alſo in venereal ulcerations of the mouth and tonſils. If, for particular purpoſes, they ſhould be wanted more acrid, they may be occaſionally rendered ſo by ſhaking the veſſel, ſo as to mix up the thick matter at the bottom (which contains greateſt part of the verdegris) with the upper thin one.

UNGUENTUM ALBUM.

White ointment.

Lond.

Take of
- Oil olive, one pint;
- White wax, four ounces;
- Spermaceti, three ounces.

Liquefy them by a gentle fire, and keep them conſtantly and briſkly ſtirring, till grown thoroughly cold.

Edinb.

Take of
- White, or ſimple ointment, five parts.
- Ceruſſe, one part. M. S. A.

THESE are uſeful, cooling, emollient ointments, of good ſervice in excoriations, and ſimilar frettings of the ſkin. The ceruſſe is omitted in the firſt preſcription, on a ſuſpicion that it might produce ſome ill effect, when applied, as theſe unguents frequently are, to the tender bodies of children. Though there does not ſeem to be much danger in this external uſe of ceruſſe, the addition of it is the leſs neceſſary here, as there is another ointment containing a more active preparation of the ſame metal, the *unguentum ſaturninum*; which may be occaſionally mixed with this, or employed by itſelf, in caſes where ſaturnine applications are wanted.

UNGUENTUM ALBUM CAMPHORATUM.

Camphorated white ointment.

Lond.

This is made by adding to the white ointment a dram and a half of camphor, previouſly ground with ſome drops of oil of almonds.

Edinb.

Take of
The white ointment, one pound;
Camphor, rubbed with a little oil, one dram and a half.
Mix them together.

These ointments are ſuppoſed to be more diſcutient than the foregoing, and ſerviceable againſt cutaneous heats, itching, and ſerpiginous eruptions. They ſhould be kept in cloſe veſſels, otherwiſe the camphor will ſoon exhale. Their ſmelling ſtrong of this ingredient is the beſt mark of their goodneſs.

UNGUENTUM ex ALTHÆA.

Ointment of marſhmallows.

Lond.

Take of
Oil of mucilages, three pints;
Yellow wax, one pound;
Yellow reſin, half a pound;
Common turpentine, two ounces.
Melt the reſin and wax with the oil; then, having taken them from the fire, add the turpentine, and, while the mixture remains hot, ſtrain it.

This ointment receives no virtue from the ingredient from which it takes its name, and therefore the Edinburgh college has omitted it.

UNGUENTUM ANTIPSORICUM.

Ointment againſt the itch.

Take of
Elecampane root, freſh,
Sharp-pointed dock root, freſh, each three ounces;
Water-creſſes, freſh and bruiſed, ten ounces;
Hogs lard, four pounds;
Yellow wax,
Oil of bays, each four ounces;
Vinegar, one pint;
Water, three pints.
Bruiſe the roots, and boil them in the water and vinegar, till half the liquor is conſumed. Strain and ſtrongly preſs out the remainder; add to it the water-creſſes and the lard, and boil them till the moiſture is exhaled; then preſs out the ointment, and liquefy in it the wax and the oil of bays.

Sulphur is added to this ointment occaſionally.

UNGUENTUM ANTIPSORICUM cum MERCURIO.

Ointment againſt the itch with mercury.

This is made by adding to the foregoing ointment four ounces of quickſilver, killed with a ſufficient quantity of Venice turpentine, and mixing them together, according to art, into an unguent.

These ointments are very inelegant ones, and rarely made uſe of. The firſt is likewiſe precarious in its effects; and though thoſe with ſulphur and mercury are of undoubted efficacy, yet they are by no means ſuperior to the more ſimple ointments of thoſe drugs deſcribed hereafter. The Edinburgh college has therefore, at a late reformation, very properly omitted both the antipſoric ointments.

UNGUENTUM BASILICUM FLAVUM.

Yellow baſilicum ointment.

Lond.

Take of
- Oil olive, one pint;
- Yellow wax,
- Yellow reſin,
- Burgundy pitch, each one pound;
- Common turpentine, three ounces.

Melt the wax, reſin, and pitch, along with the oil, over a gentle fire; then take them from the fire, add the turpentine, and whilſt the mixture remains hot, ſtrain it.

Edinb.

Take of
- Hogs fat, eight parts;
- White reſin, five parts;
- Yellow wax, two parts.

Diſſolve them over a gentle fire.

These are commonly employed in dreſſings, for digeſting, cleanſing, and incarnating wounds and ulcers.

UNGUENTUM BASILICUM NIGRUM vel TETRAPHARMACUM.

Black baſilicum ointment, or ointment of four ingredients.

Lond.

Take of
- Oil olive, one pint;
- Yellow wax,
- Yellow reſin,
- Tar, each nine ounces.

Mix them all together, and, whilſt the mixture is hot, ſtrain it off.

This ointment was formerly of conſiderable eſteem for healing and incarnating wounds, &c. but is ſaid to have an inconvenience of being apt to render them foul, and produce fungous fleſh. At preſent in is rarely made uſe of; the yellow baſilicum, and the liniment of Arcæus, being in general preferred.

UNGUENTUM BASILICUM VIRIDE.

Green baſilicum ointment.

Lond.

Take of
- Yellow baſilicum, eight ounces;
- Oil olive, three ounces by meaſure;
- Verdegris prepared, one ounce.

Mix and make them into an ointment.

This ointment is an efficacious detergent. Our hoſpitals have been accuſtomed to prepare an ointment greatly reſembling this, under the title of *Unguentum viride detergens.*

UNGUENTUM CITRINUM.

Yellow ointment.

Edinb.

Take of
- Quickſilver, one ounce;
- Spirit of nitre, two ounces;
- Hogs lard, tried, one pound.

Diſſolve the quickſilver in the ſpirit of nitre, by digeſtion in a ſand-heat; and, whilſt the ſolution is very hot, mix with it the lard, previouſly melted by itſelf, and juſt beginning to grow ſtiff. Stir them briſkly together, in a marble mortar, ſo as to form the whole into an ointment.

UNGUENTUM CÆRULEUM FORTIUS.

The ſtronger blue ointment.

Lond.

Take of
- Hogs lard, tried, two pounds;
- Quickſilver, one pound;
- Simple balſam of ſulphur, half an ounce.

Grind the quickſilver with the balſam of ſulphur till they be perfectly incorporated; then gradually add the lard heated, and mix them carefully together.

UNGUENTUM CÆRULEUM MITIUS.

The milder blue ointment.

Lond.

Take of
- Hogs lard, tried, four pounds;
- Quickſilver, one pound;
- Common turpentine, one ounce.

Grind the quickſilver with the turpentine, in a mortar, till it ceaſe to appear; then gradually add the lard warmed, and carefully mix them together.

This laſt unguent turns out of a much better blue colour than the foregoing, which is of a very dingy hue. Mercurial unguents have in many caſes the ſame effects with the preparations of this mineral taken internally; and are at preſent frequently employed, not only againſt cutaneous diſorders, as alterants; but likewiſe in venereal and other obſtinate caſes, for raiſing a ſalivation. The ptyaliſm excited by unction is ſaid to be attended with the feweſt inconveniencies, and to perform the moſt complete cure. In ſome conſtitutions, mercurials taken inwardly, run off by the inteſtines, without affecting the mouth; and in others, they effect the ſalival glands ſo quickly, as to occaſion a copious ptyaliſm, without extending their action to the remoter parts, and conſequently without removing the cauſe of the diſeaſe.

UNGUENTUM DESICCATIVUM RUBRUM.

Red deſiccative ointment.

Take of
- Oil olive, a pint and a half;
- White wax, half a pound;
- Calamine prepared, ſix ounces;
- Litharge prepared,
- Bole armenic, each four ounces;
- Camphor, three drams.

Melt the wax in the oil, and, having taken them from the fire, gradually ſprinkle in the other ingredients, ſtirring them briſkly together into an ointment. The camphor muſt be previouſly ground with a little oil of almonds.

This is ſaid to be an excellent drier and healer; but is at preſent in no great eſteem, and rarely kept in the ſhops. It was retained in a late Edinburgh pharmacopœia, but is now dropt.

UNGUENTUM DIAPOMPHOLYGOS.

Ointment of pompholyx.

Take of
- Oil olive, twenty ounces;
- Juice of the berries of common, or deadly nightſhade, eight ounces;
- White wax, five ounces;
- Ceruſſe, four ounces;
- Burnt lead,
- Pompholyx, each two ounces;
- Pure frankincenſe, one ounce.

Boil the oil and the juice over a gentle fire, till the juice be exhaled; and, towards the end of the coction, melt the wax in the oil; then take the mixture from the fire, and add to it, whilſt hot, the other ingredients reduced to powder. Mix and make them into an ointment.

UNGUENTUM e GUMMI ELEMI.

Ointment of gum elemi.

Lond.

Take of
- Mutton ſuet, freſh and tried, two pounds;
- Gum elemi, one pound;
- Common turpentine, ten ounces.

Melt the gum with the ſuet, and having taken them from the fire, immediately mix in the turpentine;

tine; then, whilſt the maſs remains fluid, ſtrain it off.

UNGUENTUM, vulgo LINIMENTUM, ARCÆI.

The ointment, commonly called liniment, of Arceus.

Edinb.

Take of
- Hogs lard, one pound;
- Goats ſuet, or mutton ſuet, two pounds;
- Venice turpentine,
- Gum elemi, each a pound and a half.

Melt and ſtrain them, ſo as to make an ointment according to art.

This unguent has long been in uſe for digeſting, cleanſing, and incarnating; and for theſe purpoſes is preferred by ſome to all the other compoſitions of this kind.

UNGUENTUM EMOLLIENS.

Emollient ointment.

Edinb.

Take of
- Palm oil, four pints;
- Freſh-drawn linſeed oil, three pints;
- Yellow wax, one pound;
- Venice turpentine, half a pound.

Melt the wax in the oils, over a gentle fire; then mix in the turpentine, and ſtrain the ointment, which ſupplies the place of the ointment of marſhmallows.

It is at leaſt equal to that ointment for the purpoſe expreſſed in its title, nothing of the mucilage or emollient matter of the marſhmallows being there retained. And indeed if mucilages were blended with ointments, they would poſſibly diminiſh, rather than increaſe, their emollient virtue; as they render oils ſenſibly leſs unctuous, forming with them a new compound, different from the ingredients, and miſcible with water into a milky liquor, as we have ſeen in Chap. vii.

UNGUENTUM MERCURIALE.

Mercurial ointment.

Take of
- Hogs lard, two ounces;
- Quickſilver, one ounce.

Beat them together till the quickſilver diſappears. It may likewiſe be made with two, three, or more times the quantity of quickſilver.

This is the moſt ſimple of the mercurial ointments, though poſſibly as efficacious as any. It requires indeed a great deal more labour to extinguiſh the mercury in the lard alone, than when turpentine, or ſimilar ſubſtances, are joined: but, in recompence, the compoſition with lard is free from an inconvenience with which the others are accompanied, viz. being apt, by frequent rubbing, to fret tender ſkins. Some chuſe to ſtiffen this ointment with a fourth part of ſuet (proportionably diminiſhing the lard) which gives it a better conſiſtence for uſe.

The above preſcription, and remark, are from a former edition of this diſpenſatory. The college has now received the addition of ſuet, in ſuch proportion as to make one fourth the quantity of the whole ointment; the proportion of quickſilver being continued the ſame. The compoſition is now as follows.

Edinb.

Take of
- Hogs lard, three ounces;
- Mutton ſuet, one ounce;
- Quickſilver, one ounce.

Beat them together in a mortar, till the mercurial globules diſappear. This ointment is made alſo with twice, and with thrice, the quantity of mercury.

UNGUENTUM e MERCURIO PRÆCIPITATO.

Ointment of mercury precipitate.
Lond.

Take of
- Simple ointment, an ounce and a half;
- Precipitated ſulphur, two drams;
- White mercury precipitate, two ſcruples.

Mix them well together, and moiſten them with ley of tartar, that they may be made into an ointment.

This is a very elegant mercurial ointment, and frequently made uſe of againſt cutaneous diſorders. The preparations of mercury and ſulphur here directed, are choſen, on account of their colour.

UNGUENTUM NERVINUM.

Nerve ointment.

Take of
- Mutton ſuet, two pounds;
- Oil of chamomile (by decoction) one pound;
- Oil of bays, a pound and an half;
- Eſſential oil of origanum, or of roſemary, two ounces.

Melt the ſuet, over a gentle fire, in the oil of chamomile, ſo as to make an ointment; which being removed from the fire, ſtir into it the oil of bays and eſſential oil.

This ointment is deſigned, as its title expreſſes, for warming and ſtrengthening the nerves.

UNGUENTUM NUTRITUM.

The ointment called nutritum.
Edinb.

Take of
- Litharge,
- Vinegar, each two ounces;
- Oil olive, ſix ounces.

Rub them in a mortar, adding the oil and vinegar, alternately, by little and little at a time, till the vinegar ceaſe to appear, and the ointment become uniform and white.

This ointment is troubleſome to make, and does not keep well, the vinegar exhaling, ſo as to leave the compound too ſtiff: for which reaſon, it is now directed to be made in leſs quantity than in former editions. It is ſuppoſed to be a good cooler and deſiccative; and is occaſionally uſed in excoriations, ſlight ſerpiginous eruptions, and for anointing the lips of wounds or ulcers that itch much, or tend to inflammation.

UNGUENTUM OPHTHALMICUM.

Eye ointment.

Take of
- Ointment of tutty, an ounce and a half;
- Saturnine ointment, half an ounce;
- Camphor, half a dram.

Mix and make them into an ointment according to art.

This ointment may likewiſe be made with two, three, or more times the quantity of camphor.

This unguent is very well contrived for the purpoſe expreſſed in its title. Scarce any of thoſe commonly met with being of equal efficacy in inflammations, and hot acrid defluxions on the eyes. But as a good deal of caution is requiſite in the uſe of ſaturnine applications, for ſo tender an organ as the eye; and as compoſitions of this kind may be eaſily formed extemporaneouſly, with ſuch proportions of the ingredients as the preſcriber ſhall think fit; the Edinburgh pharmacopœia (from a preceding edition of which the above form is taken) has now omitted it.

UNGUENTUM e PICE.

Ointment of tar.

Lond.

Take of
  Mutton ſuet, tried,
  Tar, each equal weights.
Melt them together, and ſtrain the mixture whilſt hot.

THIS compoſition, with the addition of half its weight of reſin, has long been uſed in the ſhops as a cheap ſubſtitute for the black baſilicum.

UNGUENTUM SAMBUCINUM.

Ointment of elder.

Lond.

Take of
  Elder flowers, full blown, four pounds;
  Mutton ſuet, tried, three pounds;
  Oil olive, one pint.
Melt the ſuet with the oil, and in this mixture boil the flowers till they be almoſt criſp. Then ſtrain and preſs out the ointment.

Edinb.

Take of
  The inner bark of the elder tree,
  The leaves of elder, freſh, each four ounces;
  Linſeed oil, two pints;
  White wax, ſix ounces.
Let the bark and leaves be well bruiſed, and boiled in the oil till the humidity be conſumed; then preſs out the oil through a ſtrainer, and melt in it the wax, ſo as to make an ointment.

THESE ointments do not ſeem ſuperior to ſome others, which are much neater, and parable at leſs expence. They can ſcarce be ſuppoſed to receive any conſiderable virtue from the ingredients from which they take their name.

UNGUENT. SATURNINUM.

Saturnine ointment.

Lond.

Take of
  Oil olive, half a pint;
  White wax, an ounce and a half;
  Sugar of lead, two drams.
Let the ſugar of lead, reduced into a very ſubtile powder, be ground with ſome part of the oil, and the wax melted with the reſt of the oil. Mix both together, and keep them ſtirring till the ointment be cold.

Edinb.

Take of
  Sugar of lead, one ounce;
  White wax, three ounces;
  Oil olive, one pint.
Liquefy the oil and wax together, and gradually add the ſugar of lead; continually ſtirring them, till, growing cold, they unite into an ointment.

BOTH theſe ointments are uſeful coolers and deſiccatives; much ſuperior both in elegancy and efficacy to the *nutritum* or *tripharmacum*.

UNGUENTUM SIMPLEX.

The ſimple ointment.

Lond.

Take of
  Hogs-lard, tried, two pounds;
  Roſe water, three ounces by meaſure.
Beat the lard with the roſe water, till they be well mixed. Then melt them over a very gentle fire, and ſet them by for ſome time, that the water may ſubſide: pour the lard off from the water, and keep inceſſantly ſtirring and beating it about till it grows cold, ſo as to reduce it into

into a light incoherent maſs. Laſtly, add ſo much eſſence of lemons as will be ſufficient to give a grateful odour.

UNGUENTUM ROSACEUM, vulgo POMATUM.

The roſe ointment, commonly called pomatum.

Edinb.

On any quantity of hogs lard, cut into ſmall pieces, and placed in a glazed earthen veſſel, pour as much water as will riſe above it ſome inches; and digeſt them together for ten days, renewing the water every day. Then liquefy the lard with a very gentle heat, and pour it into a proper quantity of roſe water. Work them well together; and afterwards, pouring off the water, add to the lard ſome drops of oil of rhodium.

These ointments are in common uſe for ſoftening and ſmoothing the ſkin, and healing chops.

UNGUENTUM e SULPHURE.

Ointment of ſulphur.

Lond.

Take of
- The ſimple ointment, half a pound;
- Flowers of ſulphur, unwaſhed, two ounces;
- Eſſence of lemons, one ſcruple.

Mix them together.

This is deſigned for cutaneous diſorders. It is much neater than the *unguentum antipſoricum cum ſulphure*, though, at leaſt, equally efficacious.

UNGUENTUM AD PSORAM.

Ointment againſt the itch.

Take of
- Sulphur, one ounce;
- White hellebore root, in powder, or crude ſal ammoniac, two drams;
- Hogs lard, two ounces.

Mix, and make them into an ointment.

Sulphur is a certain remedy for the itch, more ſafe and efficacious than mercury. For, as Dr. Pringle obſerves, unleſs a mercurial unction were to touch every part of the ſkin, there can be no certainty of ſucceſs; whereas, by a ſulphureous one, a cure may be obtained by only partial unction; the animalcula, which occaſion this diſorder, being, like other inſects, killed by the ſulphureous ſteams which exhale by the heat of the body. As to the internal uſe of mercury, which ſome have accounted a ſpecific, there are ſeveral inſtances of men's undergoing a complete ſalivation for the cure of the lues venerea, without being freed from the itch.

The quantity of ointment, here directed, ſerves for four unctions: the patient is to be rubbed every night; but to prevent any diſorder that might ariſe from ſtopping too many pores at once, a fourth part of the body is to be rubbed at one time. Though the itch may thus be cured by one pot of ointment, it will be proper to renew the application, and to touch the parts moſt affected, for a few nights longer, till a ſecond quantity alſo be exhauſted; and in the worſt caſes to ſubjoin the internal uſe of ſulphur, not with a view to purify the blood, but to diffuſe the ſteams more certainly through the ſkin; there being reaſon to believe, that the animalcula may ſometimes lie too deep to be thoroughly deſtroyed by external applications.

UNGUENTUM TRIPHARMACUM.

Ointment of three ingredients.

Lond.

Take of
Common plaſter, four ounces;
Oil olive, two ounces by meaſure;
Vinegar, one ounce by meaſure.
Boil them together over a gentle fire, keeping them continually ſtirring till they are reduced to the conſiſtence of an ointment.

This is a new method of preparing the *unguentum nutritum*, much leſs troubleſome than the one already deſcribed under that title. The compoſition proves likewiſe more ſmooth and uniform, and not ſo liable to grow dry in keeping. This ointment is nevertheleſs inferior, both in reſpect of elegancy and efficacy, to the *unguentum ſaturninum*.

UNGUENTUM TUTIÆ.

Ointment of tutty.

Lond.

Let any quantity of prepared tutty be mixed with as much purified vipers fat, as is ſufficient to reduce it into the conſiſtence of a ſoft ointment.

This ointment is deſigned for an ophthalmic. What particular virtues it receives from the vipers fat, we ſhall not preſume to determine.

In a preſent edition of the Edinburgh pharmacopœia, this ointment is directed as follows.

Edinb.

Take of
White, or ſimple liniment, five parts;
Tutty prepared, one part.

UNGUENTUM e CALCE ZINCI.

Ointment of the calx of zinc.

Edinb.

Take of
White, or ſimple liniment, ſix parts;
Calx of zinc, one part.

UNGUENTUM VERMIFUGUM.

Ointment againſt worms.

Take of
Lavender cotton,
Wormwood,
Rue,
Savin,
Tanſy leaves, freſh gathered, each two ounces;
Oil olive, a pint and a half;
Hogs lard, one pound;
Yellow wax, three ounces;
Ox gall,
Socotorine aloes, each an ounce and a half;
Coloquintida,
Wormſeed, each one ounce.
Bruiſe the herbs, and boil them with the oil and lard, till the aqueous moiſture be evaporated; then preſs the liquor through a ſtrainer, melt in it the wax, and afterwards add the other ingredients, boiling and ſtirring them together, ſo as to make an ointment. The aloes, coloquintida, and wormſeed, muſt be previouſly reduced into a very ſubtile powder.

This ointment is rubbed on the bellies of children for deſtroying worms, and ſometimes, as is ſaid, with good ſucceſs. It is taken from a preceding edition of the Edinburgh pharmacopœia; ſince which it is omitted.

UNGUENTUM ad VESICATORIA.

Ointment for bliſters.

Lond.

Take of
Hogs lard, tried,
Bliſtering plaſter, each equal weight.
Melt them together over a very gentle fire, and keep them conſtantly ſtirring till grown cold.

UNGUENTUM EPISPASTICUM e PULVERE CANTHARIDUM.

Ointment for bliſters with the powder of cantharides.

Edinb.

Take of
Baſilicum ointment, ſeven parts;
Cantharides, powdered, one part.

These ointments are added in the dreſſings for bliſters, intended to be made perpetual, as they are called, or to be kept running for a conſiderable time, which in many chronic, and ſome acute caſes, they are required to be. Particular care ſhould be taken, that the cantharides employed in theſe compoſitions be reduced into very ſubtile powder, and that the mixtures be made as equal and uniform as poſſible.

UNGUENTUM EPISPASTICUM ex INFUSIONE CANTHARIDUM.

Ointment for bliſters with the infuſion of cantharides.

Edinb.

Take of
Cantharides,
White reſin,
Yellow wax, each one ounce;
Hogs lard,
Venice turpentine, each two ounces;
Boiling water, four ounces.
Infuſe the cantharides in the water, in a cloſe veſſel, for a night; then ſtrongly preſs out and ſtrain the liquor, and boil it with the lard till the watery moiſture be conſumed; then add the reſin, wax, and turpentine, and make the whole into an ointment.

This ointment, containing the ſoluble parts of the cantharides uniformly blended with the other ingredients, is more commodious, and occaſions leſs pain, though not leſs effectual in its intention, than the two foregoing compoſitions with the fly in ſubſtance.

UNGUENTUM VIRIDE.

Green ointment.

Lond.

Take of
The green oil, three pints;
Yellow wax, ten ounces.
Melt them together over a gentle fire, and keep the mixture continually ſtirring until it grow cold.

This ointment does not ſeem to receive any particular virtue from the ingredients to which its colour is owing.

LINIMENTUM ALBUM.

White liniment.

Lond.

Take of
Oil olive, three ounces by meaſure;
Spermaceti, ſix drams;
White wax, two drams.
Melt them together over a gentle fire, and keep them conſtantly and briſkly ſtirring, till grown cold.

This differs only in conſiſtence from the *unguentum album.*

UNGUEN-

UNGUENTUM ex ÆRUGINE.

Verdegris ointment.

Edinb.

Take of
Baſilicum ointment, five parts;
Verdegris, one part.

A balſam, ſimilar to this, is ſaid to have been greatly valued by our ſurgeons as a detergent.

LINIMENTUM TRIPHARMACUM.

Liniment of three ingredients.

Lond.

Take of
Common plaſter, four ounces;
Oil olive, a quarter of a pint;
Vinegar, one ounce by meaſure.
Boil them over a gentle fire, continually ſtirring them until they acquire the conſiſtence of a liniment.

This is the ſame with the *unguentum tripharmacum*, except that the quantity of oil is here increaſed, to give the compound the ſofter conſiſtence of a liniment.

LINIMENTUM VOLATILE.

Volatile liniment.

Take of
Oil of hartſhorn,
Spirit of hartſhorn, each equal parts.
Mix them together.

Dr. Pringle obſerves, that in the inflammatory quinſey, or ſtrangulation of the fauces, a piece of flannel, moiſtened with this mixture, and applied to the throat, to be renewed every four or five hours, is one of the moſt efficacious remedies. By means of this warm ſtimulating application, the neck, and ſometimes the whole body, is put into a ſweat, which, after bleeding, either carries off or leſſens the inflammation. Where the ſkin cannot bear the acrimony of this mixture, the volatile liniment of the ſhops may be tried.

CERATUM ALBUM.

White cerate.

Lond.

Take of
Oil olive, a quarter of a pint;
White wax, four ounces;
Spermaceti, half an ounce.
Liquefy them all together, and keep them ſtirring till the cerate be quite cold.

This differs from the white ointment and liniment, only in being of a thicker conſiſtence.

CERATUM CITRINUM.

Yellow cerate.

Lond.

Take of
Yellow baſilicum ointment, half a pound;
Yellow wax, one ounce.
Melt them together.

This is no otherwiſe different from the yellow baſilicum, than being of a ſtiffer conſiſtence, which renders it for ſome purpoſes more commodious.

CERATUM EPULOTICUM.

Epulotic cerate.

Lond.

Take of
Oil olive, one pint;
Yellow wax,
Calamine prepared, each half a pound.
Liquefy the wax with the oil, and, as ſoon as the mixture begins to grow ſtiff, ſprinkle in the calamine; keeping them conſtantly ſtirring together, till the cerate be quite cold.

CERATUM e LAPIDE CALAMINARI.

Cerate of calamine.

Edinb.

Take of
- White, or ſimple cerate, five parts;
- Calamine prepared, one part.

THESE compoſitions are formed upon the cerate which TURNER ſtrongly recommends in cutaneous ulcerations and excoriations, and which has been uſually diſtinguiſhed by his name. They appear from experience to be excellent epulotics, and are frequently made uſe of in practice.

CERATUM MERCURIALE.

Mercurial cerate.

Lond.

Take of
- Yellow wax,
- Hogs lard, tried, each half a pound;
- Quickſilver, three ounces;
- Simple balſam of ſulphur, one dram.

Melt the wax with the lard, then gradually add this mixture to the quickſilver and balſam of ſulphur previouſly ground together.

* CERATUM SAPONACEUM.

Soap cerate.

Take of
- Litharge, in powder, one pound;
- The ſharpeſt wine vinegar, one gallon;
- Caſtile ſoap, ſhaved thin, half a pound;
- Oil olive, one pound;
- Yellow wax, ten ounces.

Diſſolve two ounces of the ſoap in a quart of the vinegar, and mix it with the litharge; ſimmer it over a gentle fire, keeping it conſtantly ſtirring, till the vinegar is nearly evaporated, when add a quart more vinegar and two ounces more of ſoap diſſolved in it, and evaporate as before; repeat it to the fourth time; and when the vinegar is all evaporated, add the oil and wax, melted together beforehand in another veſſel, and boil it gently to the conſiſtence of a cerate.

THIS cerate has been uſed many years, with great ſucceſs, in moſt of our hoſpitals, for defending the parts from defluxions, in fractures, diſlocations, and contuſions; and is univerſally approved of, as a moſt excellent diſcutient.

UNGUENTUM PARALYTICUM.

Palſy ointment.

Take of
- Hogs lard,
- Oil of bays, each four ounces;
- Strong ſpirit of vitriol, one ounce.

Mix, and make them into an unguent.

THIS irritating compoſition is applied to numbed or paralytic limbs. It ſoon reddens and inflames the ſkin, and, when this effect is produced, muſt be taken off; after which, the part is to be anointed with any emollient unguent, as that of elder.

UNGUENTUM DIGESTIVUM.

Digeſtive ointment.

Take of
- Yellow baſilicum,
- Black baſilicum, each eight ounces;
- Balſam of turpentine, four ounces.

Mix and make them into an ointment.

T t LINIMEN-

LINIMENTUM ANODYNUM.

Anodyne liniment.

Take of
- Nerve ointment, three ounces;
- Balſam of turpentine, one ounce.

Mix them together.

LINIMENTUM HÆMORRHOIDALE.

Liniment for the piles.

Take of
- Emollient ointment, two ounces;
- Liquid laudanum, half an ounce.

Mix theſe ingredients, with the yolk of an egg; and work them well together.

CHAP.

CHAPTER XII.

Epithems.

EPITHEMA VESICATORIUM.

Bliſtering epithem.

Lond.

TAKE of
Cantharides, reduced into a moſt ſubtile powder,
Wheat flour, each equal weights.
Make them into a paſte with vinegar.

THIS compoſition is of a ſofter conſiſtence than the bliſtering plaſters, and, for this reaſon, is in ſome caſes preferred. Practitioners differ with regard to the degree of conſiſtence and adheſiveneſs moſt proper for applications of this kind, and ſometimes vary them occaſionally.

CATAPLASMA e CYMINO.

Cataplaſm of cummin.

Lond.

Take of
Cummin ſeeds, half a pound;
Bay berries,
Scordium leaves, dried,
Virginian ſnakeroot, each three ounces;
Cloves, one ounce;
Honey, thrice the weight of the powdered ſpecies.
Make them into a cataplaſm.

THIS is a reformation of the THERIACA LONDINENSIS, which for ſome time was ſcarce otherwiſe made uſe of than as a warm cataplaſm; only ſuch of its ingredients are retained as contribute moſt to this intention.

CATAPLASMA AROMATICUM.

Aromatic cataplaſm.

Edinb.

Take of
Long birthwort root,
Bay berries, each four ounces;
Sweet fennel ſeeds,
Mint leaves, each three ounces;
Jamaica pepper,
Myrrh, each two ounces;
Honey, thrice the weight of the powders.
Mix and make them into a cataplaſm; which ſupplies the place of theriaca for external purpoſes.

CATAPLASMA DISCUTIENS.

Diſcutient cataplaſm.

Edinb.

Take of
Bryony root, three ounces;
Elder flowers, one ounce;
Gum ammoniac, half an ounce;
Sal ammoniac, crude, two drams;
Camphorated ſpirit of wine, one ounce.
Boil the roots and flowers in a ſufficient quantity of water, till they become tender; and, having then bruiſed them, add to them the gum ammoniacum, diſſolved in a ſufficient quantity of vinegar, and likewiſe the ſal ammoniac and ſpirit. Mix the whole together, ſo as to make them into a cataplaſm.

THIS compoſition is as good a diſcutient as any thing that can well be contrived in the form of a cataplaſm. In ſome of our hoſpitals the following more ſimple form is made uſe of.

CATAPLASMA DISCUTIENS.

Diſcutient cataplaſm.

Take of
Barley meal, ſix ounces;

Freſh hemlock, well bruiſed, two ounces;
Crude ſal ammoniac, half an ounce;
Vinegar, a ſufficient quantity.

Boil the meal and the hemlock leaves for a little time in the vinegar, and then mix with them the ſal ammoniac.

CATAPLASMA MATURANS.

Ripening cataplaſm.

Lond.

Take of
Figs, four ounces;
Yellow baſilicum ointment, one ounce;
Galbanum, ſtrained, half an ounce.

Beat the figs thoroughly in a mortar, occaſionally dropping in ſome ſpirit of wine or ſtrong ale; then carefully mix with them the ointment, firſt liquefied along with the galbanum.

CATAPLASMA SUPPURANS.

Suppurating cataplaſm.

Edinb.

Take of
White lily (or marſhmallow) roots, four ounces;
Fat figs, one ounce;
Raw onions, bruiſed, ſix drams;
Galbanum, half an ounce;
Yellow baſilicum ointment,
Oil of chamomile by decoction, each one ounce;
Linſeed meal, as much as is ſufficient.

Let the lily (or marſhmallow) roots be boiled along with the figs, in a ſufficient quantity of water, till they become tender. Then bruiſe, and add to them the other ingredients, and make the whole into a cataplaſm, according to art. The galbanum muſt be previouſly diſſolved in the yolk of an egg.

Both theſe compoſitions are good ſuppurants, or ripeners; though their effects probably depend more on their keeping the part ſoft, moiſt, and warm, than on any particular qualities of the ingredients.

SINAPISMUS.

A ſinapiſm.

Edinb.

Take of
Muſtard ſeed, in powder,
Crumb of bread, each equal parts;
Strong vinegar, as much as is ſufficient.

Mix and make them into a cataplaſm; to which is ſometimes added a little bruiſed garlic.

In a preceding edition, two ſinapiſms were deſcribed; a *ſimple*, which is that before directed, without the garlick; and a *compound*, which is as follows.

Take of
Muſtard ſeed, in powder,
Crumb of bread, each two ounces;
Garlic, bruiſed, half an ounce;
Black ſoap, one ounce;
Strong vinegar, a ſufficient quantity.

Mix and make them into a cataplaſm, according to art.

Both theſe compoſitions are employed only as ſtimulants. They often inflame the part, and raiſe bliſters, but not ſo perfectly as cantharides. They are frequently applied to the ſoles of the feet in the low ſtate of acute diſeaſes, for raiſing the pulſe and relieving the head.

COAGULUM ALUMINOSUM.

Alum curd.

Lond.

Take of

Any quantity of the white of eggs.

Agitate it with a ſufficiently large lump of alum, in a tin diſh, till it be coagulated.

This preparation is taken from Riverius. It is an uſeful aſtringent epithem for ſore, moiſt eyes, and excellently cools and repreſſes thin defluxions. Slighter inflammations of the eyes, occaſioned by duſt, expoſure to the ſun, or ſimilar cauſes, are generally removed by fomenting them with warm milk and water, and waſhing them with the collyrium deſcribed before. Where the complaint is more violent, this preparation, after the inflammation has yielded a little to bleeding, is one of the beſt external remedies. It is to be ſpread on lint, and applied at bed-time.

CATAPLASMA EMOLLIENS.

Emollient cataplaſm.

Take of
Crumb of bread, eight ounces;
White ſoap, one ounce;
Cows' milk, freſh, a ſufficient quantity.
Boil them a little together.

CATAPLASMA STOMACHICUM.

Stomachic cataplaſm.

Take of
The aromatic cataplaſm, one ounce;
Expreſſed oil of mace, two drams;
Anodyne balſam, as much as is ſufficient to reduce them into a proper conſiſtence.

CATAPLASMA CAMPHORATUM.

Camphorated cataplaſm.

Take of
Aromatic cataplaſm, one ounce;
Camphor, one dram.
Mix them together.

CATAPLASMA ISCHIADICUM.

Iſchiadic cataplaſm.

Take of
Muſtard ſeed, half a pound;
White pepper,
Ginger, each one dram;
Simple oxymel, as much as will reduce them into a cataplaſm.

The uſe of theſe compoſitions, which are taken from our hoſpitals, may be eaſily underſtood from their titles. The laſt is a very ſtimulating application, and frequently veſicates the ſkin.

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